Usenet Newsgroup Archive: rec.radio.amateur.homebrew

2002-01 - 2002-05

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Date span: 2002-01-01 through 2002-05-31

Source text: rec.radio.amateur.homebrew.txt

Source item: https://archive.org/details/usenet-rec

Messages included in this PDF: 3,921

Message records with no readable body available in the source text: 6

Messages are presented chronologically by archived date.

Binary or encoded payloads are not printed as blocks of encoded text; a placeholder appears where such material was detected. The original source text is unchanged.

1. Re: Diagram for 110V to 12vDC convertor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 00:15:37 UTC
From: dbagley@mindspring.com
Message-ID: <a0r2ps$8nc$1@slb4.atl.mindspring.net>
Source record: 47746

Try radio shack, they have a book on building simple power supplies
Dwayne
"Walt Stanley" <walterms@prodigy.NOSPAM.net> wrote in message
news:m9d13u4uvtauq50te5erjut9em41o9as25@4ax.com...
> Can anyone point me to where I can find diagrams for building a converter
so I
> can power a car radio with house current? TIA
>
> --
> Walt Stanley
>
> Skeptics are seldom deceived.

2. Re: building a microphone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 00:58:48 UTC
From: willy <willyacht@yahoo.com>
Message-ID: <FO7Y7.55602$HW3.27948@newsfeeds.bigpond.com>
Source record: 47743

The simplest way to make a microphone is to use a speaker! Thats right any old speaker will do, but the better performance comes from modern speakers. The bass response is superb, it actually puts to shame the audio of those guys on 14.178 using million dollar everything. Try it you will be amazed. It works really well on the older Kenwood radios like the TS5XX, TS8,xx series of radios. You may need to build a small op amp or low noise transistor pre-amp on modern radios. Only problem with this device is that it is large, you cant see the rig when talking. You get amazing results with large 8 inch and 10 inch cones.
But as for quality i would give it a 10/10.

Willy
"Richard Crowley" <rcrowley7@xprt.net> wrote in message
news:u2vpgls02ek326@corp.supernews.com...
> "gil" wrote ...
> > Any web pages or ideas/plans on building your own microphone?
>
> What do YOU mean by "building" a microphone?
>
> There are at least a half-dozen completely different ways to interperet
that
> question, presumably only one of which is what YOU are talking about.
What
> do you want to use it for?
>
> RC
>
>

3. Re: Removing scratches form plastic meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 01:02:14 UTC
From: willy <willyacht@yahoo.com>
Message-ID: <RR7Y7.55603$HW3.27937@newsfeeds.bigpond.com>
Source record: 47744

Good stuff is a product called MicroMesh polish. This is what they use to remove scratches from aeroplane windows.
Joulers rouge also works, as well as machinist fine rouge for polishing metal.

Willy

"Owen Duffy" <owen@oda.com.au> wrote in message news:3C2FC7E7.267079C6@oda.com.au...
> In Oz, we have a product called Brasso which is a metal polish for
> copper and brass. It includes a very fine abrasive and is applied and
> polished with a soft cloth, it works a treat on lots of plastics.
>
> You probably have similar products, but test them on something of no
> value.
>
> Owen
>
> Dan Richardson wrote:
> >
> > Hi,
> >
> > Would like to get some suggestions for removing fine scratches from
> > plastic meter faces (covers).
> >
> > Thanks,
> >
> > Danny, K6MHE

4. Re: Need help figuring out one-stage circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 01:09:16 UTC
From: Charles Reichert <kd9jq@mc.net>
Message-ID: <3C310C3C.4BEC6C83@mc.net>
Source record: 47745

Clifton,

It's possible the other smaller winding on the loop is meant for the transistor base, but most likely problem is improper device biasing. You are "saturating" the device for Beta's of 100 or more. Some form of Bypassed Emitter resistance is needed. Try .1uf across a 560 ohm emitter resistor to start. Adjust the Emitter
resistor such that the Collector voltage is approx 4.8 to 5VDC to ground at the collector.

This should get you out of saturation and into a linear RF amplifier mode.

73 Chuck KD9JQ

http://www.geocities.com/kd9jq/hamradio/kd9jq.html

"Clifton T. Sharp Jr." wrote:

> This one's part of a Radio Shack "AM / shortwave radio" demonstrator they
> put on clearance a while back. I can't make sense of the stage I'm looking
> at.
>
> The ferrite-or-powdered-iron (I can't tell which) loopstick has two windings.
> The larger is paralleled with the tuning capacitor. One end of the takeoff
> winding goes to the base of a 2SC945. Collector supply: 9V battery through
> 1K resistor to a 33 uF cap sets the "master" supply voltage; from there
> through a 3.9K and then a 200 uH coil to the collector. Base biasing via
> 330K from collector to base. Output from collector through 0.1 uF cap to
> anode of a germanium diode, diode cathode has 0.05 uF to ground and then
> goes to the other end of the takeoff coil. Emitter is at ground. Circuit
> stage output from the transistor collector to a two-stage audio amp.
>
> In practice it works terribly. It clips on all but the weakest stations
> ("weakest" example is a 5 KW station 20 miles from here). Yes, it's wired
> right. I did find one stoopid misteak already. (Had swapped a 1K and a 10K.)
>
> Anyone have any clues for me as to how this circuit is *supposed* to work?
> I'm baffled. I can only guess they're trying to feed audio back through
> the takeoff coil for extra amplification. My guess as to how the biasing
> *should* work doesn't come close to measurements, etc. etc.
>
> P.S.: I bought it for the ferrite-or-powdered-iron rod. I *thought* I'd
> be able to toss the rest. I oughta know better by now.
>
> --
> Remember, "close" counts in horse-shoes, hand-grenades and nuclear warfare,

> but in spamming, it's considered unnecessary precision. -- Alun Jones

5. Re: Need help figuring out one-stage circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 01:16:40 UTC
From: tom_bruhns@agilent.com
Message-ID: <3832adca.0112311716.4338f132@posting.google.com>
Source record: 47647

Hi Cliff,

Hmmm...as you've described it, I don't see any DC return path for the diode, except for its own leakage current. I'd guess the diode is supposed to change the bias on the transistor, for either simple AGC (but it's facing the wrong direction for that...) or to optimize the operating point as a detector. But in any event, with no DC return path, it's not going to do much of anything!

Cheers,
Tom

"Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message news:<3C30EE24.2C1BDEE8@clifto.com>...
> This one's part of a Radio Shack "AM / shortwave radio" demonstrator they
> put on clearance a while back. I can't make sense of the stage I'm looking
> at.
>
> The ferrite-or-powdered-iron (I can't tell which) loopstick has two windings.
> The larger is paralleled with the tuning capacitor. One end of the takeoff
> winding goes to the base of a 2SC945. Collector supply: 9V battery through
> 1K resistor to a 33 uF cap sets the "master" supply voltage; from there
> through a 3.9K and then a 200 uH coil to the collector. Base biasing via
> 330K from collector to base. Output from collector through 0.1 uF cap to
> anode of a germanium diode, diode cathode has 0.05 uF to ground and then
> goes to the other end of the takeoff coil. Emitter is at ground. Circuit
> stage output from the transistor collector to a two-stage audio amp.
>
> In practice it works terribly. It clips on all but the weakest stations
> ("weakest" example is a 5 KW station 20 miles from here). Yes, it's wired
> right. I did find one stoopid misteak already. (Had swapped a 1K and a 10K.)
>
> Anyone have any clues for me as to how this circuit is *supposed* to work?
> I'm baffled. I can only guess they're trying to feed audio back through
> the takeoff coil for extra amplification. My guess as to how the biasing
> *should* work doesn't come close to measurements, etc. etc.
>
> P.S.: I bought it for the ferrite-or-powdered-iron rod. I *thought* I'd
> be able to toss the rest. I oughta know better by now.

6. Re: Need help figuring out one-stage circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 01:22:04 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <a0r2vracc1@knossos.btinternet.com>
Source record: 47648

```
"Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message
news:3C30EE24.2C1BDEE8@clifto.com...
> This one's part of a Radio Shack "AM / shortwave radio" demonstrator they
> put on clearance a while back. I can't make sense of the stage I'm looking
> at.
>
> The ferrite-or-powdered-iron (I can't tell which) loopstick has two
windings.
> The larger is paralleled with the tuning capacitor. One end of the takeoff
> winding goes to the base of a 2SC945. Collector supply: 9V battery through
> 1K resistor to a 33 uF cap sets the "master" supply voltage; from there
> through a 3.9K and then a 200 uH coil to the collector. Base biasing via
> 330K from collector to base. Output from collector through 0.1 uF cap to
> anode of a germanium diode, diode cathode has 0.05 uF to ground and then
> goes to the other end of the takeoff coil. Emitter is at ground. Circuit
> stage output from the transistor collector to a two-stage audio amp.
>
> In practice it works terribly. It clips on all but the weakest stations
> ("weakest" example is a 5 KW station 20 miles from here). Yes, it's wired
> right. I did find one stoopid misteak already. (Had swapped a 1K and a
10K.)
>
> Anyone have any clues for me as to how this circuit is *supposed* to work?
> I'm baffled. I can only guess they're trying to feed audio back through
> the takeoff coil for extra amplification. My guess as to how the biasing
> *should* work doesn't come close to measurements, etc. etc.
>

It's a 'reflex' rceiver. The audio from the detector diode is fed back to
the first transistor and amplified (at AF). The same transistor is
amplifying both RF and AF - it saves a transistor stage. Reflex receivers
used to be very popular over 40 years ago; I built a couple myself and they
worked very well. Regeneration (positive feedback) was also popular, and
often used togther with reflexing for added gain and selectivity.

The biasing for that first transistor is probably wrong for that particular
device. Check the collector voltage, it should be about 4.5 V. If it isn't
try changing the bias resistor to get the voltage about midway between
supply and ground. That should cure the clipping.

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.con
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com
```

7. Re: YIG data wtd

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 01:25:26 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C311023.5562@pop.removethistomailme.net>
Source record: 47649

gd wrote:
>
> Hi Rex,
> yes, custom products.....hmmmm - didn't think about that - DOH!
>
> I was also surprised by the "fm filter" pins.It identifies them as filter,
> as there are also (as expected) a set of "fm osc" pins. The case has a
> second sma connector housing but its blind. The label states oscillator: 2-8
> GHz, so thats where i assumed that perhaps a standard housing was used. But
> when i measured ~1 ohm between the pins iI became a little confused why fit
> the coil?
> No date of manufacture indicated unless thats extracted from the serial
> number? SN 2072B
>
> Thanks for the help
> Cheers
> All the best for Christmas & New Year from Australia

I don't have any specs for these units either, but usually the
oscillators tune at something on the order of 20 MHz/mA on the main
tuning coil. You won't see any output at all until you put enough
current through the coil to approach the unit's lower frequency limit;
e.g. 100 mA for 2 GHz.

The main tuning coil will probably be the one with the lowest DC
resistance. There may be a heater element as well, but it (along with
the FM winding) can be left for later identification. Vcc on the
Avantek YIGs I've seen is in the +12-15V range.

I think Agilent owns Avantek these days. You might give them a call, it
couldn't hurt.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

8. Re: Diagram for 110V to 12vDC convertor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 02:19:37 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C311CB9.AAAC5070@ieee.org>
Source record: 47650

True,

But you might have learned a lot.

Clyde

robrk wrote:

> Go to Radio Shack and get one of their solid state project books and read up
> on making one,
> then buy one of their power supplies. By the time you get all the parts,
> case,tools. and test
> meter to see if it's working right, you've spent three times the price.

9. How NOT to cut a piece of copper tubing

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 03:08:44 UTC
From: Mike Monett <mrmonett@yahoo.com>
Message-ID: <3C31283C.75FB@yahoo.com>
Source record: 47651

To all,

Small jobs can turn into disasters if you let them. Here's how mine went.

I needed a 2 inch piece of 3/16" copper tubing to mount two light bulbs for my stereo zoom microscope. The halogen bulb burned out and I was darned if I was going to give the supplier another $32 for a replacement, especially when it died so quickly.

WallMart sells GE 40 watt spotlight bulbs for CAN $3.98. I bought two, plus a dimmer to adjust the light level. Two light sockets cost CAN $0.75 each, and I figured I would have a lifetime of use with a simple, cheap replacement.

I did all the eningeering stuff. I plugged one bulb in and let it warm up while I ate dinner. That took 20 minutes. I figured the bulb temperature had stabilized and I touched it.

Not too bad. My calibrated thumb and finger showed it was slightly above the 140 degrees F that I normally use for go/no go thermal decisons. Actually, the hissing sound from my fingers told me it was quite a bit above, so I let go quickly.

On to the next step. I placed one bulb in the optimum location on the microscope and checked the illumination. At maximum zoom, there was plenty of light, and moving the bulb had very little effect.

Things were looking up. If I ran two bulbs on each side of the microscope, my fingers could not get in the way and shut the light off while I was soldering.

Even better, if one bulb burned out, there would be plenty of light from the other, so I could continue working until WallMart opened and I could get another bulb. At 10% of the cost of the halogen, I would be grinning all the way.

Since I really didn't need 80 watts of illumination only 4 inches from the work area, I could adjust the dimmer to reduce the level, and the bulbs would last forever.

The plan is working perfectly so far. On to the crucial step.

I measured the distance between the bulbs. If I cut a small piece of copper tubing, I could solder to the socket pins and just let the bulbs hang from the microscope mount. Two inches would do it.

This is when the plan started to fail. I took my handy dandy tubing cutter, which unfortunately had a recent experience with a solid stainless steel rod, so it was not quite as sharp as before.

But copper tubing should be easy - right? Well, I tried but things went very slow.

I decided to speed things up by chucking the tubing in my handy electric drill. I figured I could control the speed well enough with the trigger adjustment to make a clean cut.

Things didn't quite work out the way I planned.

I had to hold the cutter with my right hand. This left my left hand free to control the drill and adjust the speed.

I rested the drill in my lap and applied power with my thumb. I had no idea what was to come.

Within milliseconds, the drill somehow advanced to maximum rpm, and I let go of the cutter out of surprise.

Bad move. The weight of the cutter on the end of thin copper tubing going at a zillion rpm quicky forced it off-balance. I now had one-half of a small propeller with a weight on the end, going as fast as the drill would go.

I couldn't release the trigger on the drill. It moved into my thumb.

The end of the copper tube found my shirt. Things deteriorated very rapidly from there.

Actually, it wasn't so bad. Except for a ruined shirt and blood all over the microscope. The doctor said the stiches will be out in a week or so.

There are many examples of poor use of power equipment. But I hope you will never experience such stupidity as I just demonstrated.

Have a Happy New Year!

Mike Monett
ex VE3CKS

10. Re: How NOT to cut a piece of copper tubing

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 04:17:21 UTC
From: mikea@mikea.ath.cx
Message-ID: <lLaY7.5737$oe4.1461889142@newssvr16.news.prodigy.com>
Source record: 47652

Mike Monett <mrmonett@yahoo.com> wrote:

: Actually, it wasn't so bad. Except for a ruined shirt and blood all
: over the microscope. The doctor said the stiches will be out in a
: week or so.

I have an AO Series 11 trinocular, and you stay the Hell away
from it! At least the 'scope should clean up pretty easily, and
shirts are cheap.

I'm really glad something Much Worse didn't happen.

My boss, some 20 years ago, was trying to drill a rivet out of
a boatanchor chassis. The rivet held down one end of a stiff wire
dingus. He had drilled the rivet out of the other end, and so it
started whipping aroud -- rivet and wire both, and this meant he
wasn't getting any farther on drilling the rivet out. When he put
his left index finger down to stop the wire, it whipped the whole
end joint of that finger off, a little bit at a time, but _very_
fast.

I had never thought about that particular failure mode until
then. Now I try to think about _all_ the ways something can go
wrong if I fsck up, and use the least risky one.

Goodness! The sigmonster was reading along. Look what it picked:

--
"With M$, as far as I'm aware, the stupidity comes bundled with
the software."
-- Meg Thornton, in the Monastery

11. Re: Need help figuring out one-stage circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 05:31:21 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C3149A9.5B9A0630@clifto.com>
Source record: 47653

Tom Bruhns wrote:
> Hmmm...as you've described it, I don't see any DC return path for the
> diode, except for its own leakage current. I'd guess the diode is
> supposed to change the bias on the transistor, for either simple AGC
> (but it's facing the wrong direction for that...) or to optimize the
> operating point as a detector. But in any event, with no DC return
> path, it's not going to do much of anything!

It's funny they'd release the product this way. Very weak stations (like
the 5 KW station 20 miles from me) won't come in without the diode, but
stronger stations are much less distorted without it.

I have no idea what was in the mind of the designer. I hate when that
happens.

--
Remember, "close" counts in horse-shoes, hand-grenades and nuclear warfare,
but in spamming, it's considered unnecessary precision. -- Alun Jones

12. Re: How NOT to cut a piece of copper tubing

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 09:33:30 UTC
From: whagen6@cs.com
Message-ID: <20020101043330.04962.00002090@mb-mp.news.cs.com>
Source record: 47654

no kidding! especially with that thing so close to yer a.. lap..!

13. Re: How NOT to cut a piece of copper tubing

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 11:07:08 UTC
From: Eike Lantzsch <eikelan@gmx.net>
Message-ID: <slrna3362s.bkf.eikelan@ID-77364.user.dfncis.de>
Source record: 47655

Mike Monett wrote:
> To all,
>
> Small jobs can turn into disasters if you let them. Here's how mine
> went.
>
[snip]
>
> Since I really didn't need 80 watts of illumination only 4 inches
> from the work area, I could adjust the dimmer to reduce the level,
> and the bulbs would last forever.
>
[snippety snip]
>
> There are many examples of poor use of power equipment. But I hope
> you will never experience such stupidity as I just demonstrated.
>
> Have a Happy New Year!
>
> Mike Monett
> ex VE3CKS

Hi Mike,
I imagine it wasn't so funny for you but, well, you made me smile.
I myself had some unpleasant encounters with power drills too, but
I wasn't so bold as to tell the whole world ;-)
^--too many "Is" in one line vertical here
The lamentable accident aside - I doubt that dimming halogen bulbs
extend their lifetime. The lifetime of halogen bulbs is AFAIK extended
compared to normal bulbs by means of the halogen cycle, which
condensates the evaporated metal of the filament onto the filament again
instead of onto the glass bulb. To make this cycle work the glass bulb
has to have a certain minimum temperature which is considerably higher
than normal light bulbs. To my understanding dimming the halogen bulbs
results in bringing the bulbs back to normal operation, disrupting the
halogen cycle. Of course dimming the bulbs would otherwise extend the
lifetime as it does on normal bulbs. But doesn't dimming do harm to the
"chemistry" of the bulbs if used over extended periods?
Just my thought...
Hope you will recover soon and completely.

Regards, Ike
--
. . Eike Lantzsch ZP6CGE
<___> CdC 1519 ASUNCION PY

```
____|\|\ ____ .ooo../ www.geocities.com/cgelantzsch/index.html
_________\ \_____/ Don't get the snake entangled on the drill
```

14. Re: How NOT to cut a piece of copper tubing

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 11:17:59 UTC
From: "Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net>
Message-ID: <8DF62BA26471D7A1.0854E25A5125B56C.5D764513FEC8267C@lp.airnews.net>
Source record: 47656

On Tue, 01 Jan 2002 04:17:21 GMT, mikea@mikea.ath.cx (Mike Andrews)
wrote:

>The rivet held down one end of a stiff wire
>dingus. He had drilled the rivet out of the other end, and so it
>started whipping aroud -- rivet and wire both, and this meant he
>wasn't getting any farther on drilling the rivet out. When he put
>his left index finger down to stop the wire, it whipped the whole
>end joint of that finger off, a little bit at a time, but _very_
>fast.

This is why one of the first lessons you get when working with barbed
wire is, "if you have to hold it while it's being stretched or
attached to the posts, use those big pliers." I have a small scar on
my chest to remind me that it's not a good idea...two inches closer
and I'd have gotten a good look at my rib cage.

Joe Bramblett, KD5NRH
kd5nrh@kd5nrh.net

15. Source for Tube Extenders?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 14:39:41 UTC
From: BarryG <bgNOSPAM@albany.net>
Message-ID: <DSjY7.153$I5.74800@newsfeed1.thebiz.net>
Source record: 47657

Appreciate any info on who sells tube extenders - to raise a tube up from the socket and provide easy access to clip test leads on to the pins during alignment,etc.

Tnx, 73 & H2K2,
Barry N1EU

16. Re: How NOT to cut a piece of copper tubing

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 15:37:13 UTC
From: fdre584352@aol.com
Message-ID: <20020101103713.08580.00002542@mb-fz.aol.com>
Source record: 47658

>From: Eike Lantzsch eikelan@gmx.net

>The lamentable accident aside - I doubt that dimming halogen bulbs
>extend their lifetime. The lifetime of halogen bulbs is AFAIK extended
>compared to normal bulbs by means of the halogen cycle, which
>condensates the evaporated metal of the filament onto the filament again
>instead of onto the glass bulb. To make this cycle work the glass bulb
>has to have a certain minimum temperature which is considerably higher
>than normal light bulbs. To my understanding dimming the halogen bulbs
>results in bringing the bulbs back to normal operation, disrupting the
>halogen cycle. Of course dimming the bulbs would otherwise extend the
>lifetime as it does on normal bulbs. But doesn't dimming do harm to the
>"chemistry" of the bulbs if used over extended periods?

Here's a discussion of halogen bulbs and lamp dimmers:

http://www.misty.com/people/don/bulb1.html#hb

Frank Dresser

17. Re: How NOT to cut a piece of copper tubing

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 16:30:38 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <a0sp54gce1@slb3.atl.mindspring.net>
Source record: 47660

Mike Monett <mrmonett@yahoo.com> wrote:

: Actually, it wasn't so bad. Except for a ruined shirt and
: blood all over the microscope. The doctor said the stiches
: will be out in a week or so.

Murphy's law strikes again.

Well, At least we know Murphy is alive and still at it.

==========

Mike, thank you for the reminder to us all about safety. I've had one or two 'runaway' tools but so far none of them got me. OK, so there was a pichfork in my foot once....

Still, after reading your message I'm going to be just a little more careful.

Jim Pennell
N6BIU

18. Re: How NOT to cut a piece of copper tubing

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 16:34:31 UTC
From: garigue <garigue@attbi.com>
Message-ID: <rylY7.527$dK4.5805@rwcrnsc52>
Source record: 47659

>
> The end of the copper tube found my shirt. Things deteriorated very
> rapidly from there.
>
> Actually, it wasn't so bad. Except for a ruined shirt and blood all
> over the microscope. The doctor said the stiches will be out in a
> week or so.
>
> There are many examples of poor use of power equipment. But I hope
> you will never experience such stupidity as I just demonstrated.
>
> Have a Happy New Year!
>
> Mike Monett
> ex VE3CKS

Thank God Mike your relatively OK..... I have had similar things happen and now only use clamps with the drill press or Vise-Grips. Harbor Freight sells a nice drill clamp Vise-Grip hybrid that works very well. The closest tool to disaster that I have found it that circle cutter with the tool at the end of a bar and an adjustable radius. I have tried to use this on various materials all ending in mayhem to some degree or another. I guess it would be OK to drill a hole in a holiday Jell-O center piece or something like that. God Bless 73 Tom KI3R Port Vue nr Pittsburgh

19. Re: Source for Tube Extenders?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 17:09:40 UTC
From: Walter Treftz <penguino@atlantic.net>
Message-ID: <3C31ED54.D2AB3BE8@atlantic.net>
Source record: 47661

I have an extra one (can't remember if 7- or 9-pin miniture) you can have for
$7 plus postage.
73 Walt (N4GL) --- penguino@atlantic.net

BarryG wrote:

> Appreciate any info on who sells tube extenders - to raise a tube up from
> the socket and provide easy access to clip test leads on to the pins during
> alignment,etc.
>
> Tnx, 73 & H2K2,
> Barry N1EU

20. Re: How NOT to cut a piece of copper tubing

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 18:48:03 UTC
From: kenneth m cubilo <kce@freeway.net>
Message-ID: <3c320463$0$37103$2c3e98f8@news.voyager.net>
Source record: 47662

hi mike < I always tell the employee's to let the tool do the work, I had one fellow using a power drill and a 1/8 bit to drill out a bus bar. he put great pressure on the tool causing the bit to break and jump over and drill thru the back part of his hand (ouch). these tools will kill ya.
ken w8ob

Mike Monett wrote:
>
> To all,
>
> Small jobs can turn into disasters if you let them. Here's how mine
> went.
>
> I needed a 2 inch piece of 3/16" copper tubing to mount two light
> bulbs for my stereo zoom microscope. The halogen bulb burned out and
> I was darned if I was going to give the supplier another $32 for a
> replacement, especially when it died so quickly.
>
> WallMart sells GE 40 watt spotlight bulbs for CAN $3.98. I bought
> two, plus a dimmer to adjust the light level. Two light sockets cost
> CAN $0.75 each, and I figured I would have a lifetime of use with a
> simple, cheap replacement.
>
> I did all the eningeering stuff. I plugged one bulb in and let it
> warm up while I ate dinner. That took 20 minutes. I figured the bulb
> temperature had stabilized and I touched it.
>
> Not too bad. My calibrated thumb and finger showed it was slightly
> above the 140 degrees F that I normally use for go/no go thermal
> decisons. Actually, the hissing sound from my fingers told me it was
> quite a bit above, so I let go quickly.
>
> On to the next step. I placed one bulb in the optimum location on
> the microscope and checked the illumination. At maximum zoom, there
> was plenty of light, and moving the bulb had very little effect.
>
> Things were looking up. If I ran two bulbs on each side of the
> microscope, my fingers could not get in the way and shut the light
> off while I was soldering.
>
> Even better, if one bulb burned out, there would be plenty of light
> from the other, so I could continue working until WallMart opened
> and I could get another bulb. At 10% of the cost of the halogen, I

> would be grinning all the way.
>
> Since I really didn't need 80 watts of illumination only 4 inches
> from the work area, I could adjust the dimmer to reduce the level,
> and the bulbs would last forever.
>
> The plan is working perfectly so far. On to the crucial step.
>
> I measured the distance between the bulbs. If I cut a small piece of
> copper tubing, I could solder to the socket pins and just let the
> bulbs hang from the microscope mount. Two inches would do it.
>
> This is when the plan started to fail. I took my handy dandy tubing
> cutter, which unfortunately had a recent experience with a solid
> stainless steel rod, so it was not quite as sharp as before.
>
> But copper tubing should be easy - right? Well, I tried but things
> went very slow.
>
> I decided to speed things up by chucking the tubing in my handy
> electric drill. I figured I could control the speed well enough with
> the trigger adjustment to make a clean cut.
>
> Things didn't quite work out the way I planned.
>
> I had to hold the cutter with my right hand. This left my left hand
> free to control the drill and adjust the speed.
>
> I rested the drill in my lap and applied power with my thumb. I had
> no idea what was to come.
>
> Within milliseconds, the drill somehow advanced to maximum rpm, and
> I let go of the cutter out of surprise.
>
> Bad move. The weight of the cutter on the end of thin copper tubing
> going at a zillion rpm quicky forced it off-balance. I now had
> one-half of a small propeller with a weight on the end, going as
> fast as the drill would go.
>
> I couldn't release the trigger on the drill. It moved into my thumb.
>
> The end of the copper tube found my shirt. Things deteriorated very
> rapidly from there.
>
> Actually, it wasn't so bad. Except for a ruined shirt and blood all
> over the microscope. The doctor said the stiches will be out in a
> week or so.
>
> There are many examples of poor use of power equipment. But I hope
> you will never experience such stupidity as I just demonstrated.

>
> Have a Happy New Year!
>
> Mike Monett
> ex VE3CKS

21. Re: How NOT to cut a piece of copper tubing

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 20:28:16 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C321BE0.56AAC50@ieee.org>
Source record: 47663

"I rested the drill in my lap and applied power with my thumb. I had
no idea what was to come.

Within milliseconds, the drill somehow advanced to maximum rpm, and
I let go of the cutter out of surprise."

I thought he was about to one-up my torsion of the testicle story....

One cannot be too careful.

Best wishes to all for a safe new year.

Clyde

Mike Monett wrote:

> To all,
>
> Small jobs can turn into disasters if you let them. Here's how mine
> went.
>
> I needed a 2 inch piece of 3/16" copper tubing to mount two light
> bulbs for my stereo zoom microscope. The halogen bulb burned out and
> I was darned if I was going to give the supplier another $32 for a
> replacement, especially when it died so quickly.
>
> WallMart sells GE 40 watt spotlight bulbs for CAN $3.98. I bought
> two, plus a dimmer to adjust the light level. Two light sockets cost
> CAN $0.75 each, and I figured I would have a lifetime of use with a
> simple, cheap replacement.
>
> I did all the eningeering stuff. I plugged one bulb in and let it
> warm up while I ate dinner. That took 20 minutes. I figured the bulb
> temperature had stabilized and I touched it.
>
> Not too bad. My calibrated thumb and finger showed it was slightly
> above the 140 degrees F that I normally use for go/no go thermal
> decisons. Actually, the hissing sound from my fingers told me it was
> quite a bit above, so I let go quickly.
>
> On to the next step. I placed one bulb in the optimum location on
> the microscope and checked the illumination. At maximum zoom, there
> was plenty of light, and moving the bulb had very little effect.
>
> Things were looking up. If I ran two bulbs on each side of the
> microscope, my fingers could not get in the way and shut the light

> off while I was soldering.
>
> Even better, if one bulb burned out, there would be plenty of light
> from the other, so I could continue working until WallMart opened
> and I could get another bulb. At 10% of the cost of the halogen, I
> would be grinning all the way.
>
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> from the work area, I could adjust the dimmer to reduce the level,
> and the bulbs would last forever.
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> I measured the distance between the bulbs. If I cut a small piece of
> copper tubing, I could solder to the socket pins and just let the
> bulbs hang from the microscope mount. Two inches would do it.
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> This is when the plan started to fail. I took my handy dandy tubing
> cutter, which unfortunately had a recent experience with a solid
> stainless steel rod, so it was not quite as sharp as before.
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> But copper tubing should be easy - right? Well, I tried but things
> went very slow.
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> I decided to speed things up by chucking the tubing in my handy
> electric drill. I figured I could control the speed well enough with
> the trigger adjustment to make a clean cut.
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> I had to hold the cutter with my right hand. This left my left hand
> free to control the drill and adjust the speed.
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> no idea what was to come.
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> I let go of the cutter out of surprise.
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> Bad move. The weight of the cutter on the end of thin copper tubing
> going at a zillion rpm quicky forced it off-balance. I now had
> one-half of a small propeller with a weight on the end, going as
> fast as the drill would go.
>
> I couldn't release the trigger on the drill. It moved into my thumb.
>
> The end of the copper tube found my shirt. Things deteriorated very
> rapidly from there.
>
> Actually, it wasn't so bad. Except for a ruined shirt and blood all

> over the microscope. The doctor said the stiches will be out in a
> week or so.
>
> There are many examples of poor use of power equipment. But I hope
> you will never experience such stupidity as I just demonstrated.
>
> Have a Happy New Year!
>
> Mike Monett
> ex VE3CKS

22. Re: DXERS UNLIMITED SATURDAY, DECEMBER 29, 2001 Arnie Coro CO2KK

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 20:48:37 UTC
From: Loretta Shuster <simpent@ntelos.net>
Message-ID: <xgpY7.25034$a56.863@atlpnn01.usenetserver.com>
Source record: 47664
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.shortwave,uk.radio.amateur

You were quite right about 6 meters for the last 5 days. Condx have been terrific from just my mobile station with a 1/4 wave vertical and 100 watts in Virginia USA.

I've been working Europe and the Carribean quite a bit. Even heard a JY9 (Jordan) today on 6 meters but the pileups were too much for my little station.

I'm working on a project of putting a full wave horizontal loop for 6 meters on my truck (vehicle - automobile) while the Solar Cycle is at near peak and F2 DX is terrific.

73 de N4SLR, Frank.

"Radio Havana Cuba" <radiohc@radiohc.org> wrote in message news:a0si43tat7@nytr.blythe.org...
> RADIO HABANA CUBA
> DXERS UNLIMITED
>
> WEEKEND EDITION
> SATURDAY, DECEMBER 29, 2001
>
> By Arnie Coro CO2KK
>
> Send your comments, questions and ideas to: arnie@radiohc.org
>
> Hi, amigos radioaficionados, welcome to our end of 2001 show!!!! This
> is Dxers Unlimited's weekend edition coming to you from Havana.
>
> I am Arnie Coro, radio amateur CO2KK and here is item one: A VERY
> ACTIVE SUN, and a big X3 Solar Flare Friday afternoon local time here
> in Havana... CO2DT, Charlie Oscar Two Delta Tango, Pedro Domingo and
> yours truly CO2KK thought that our ham band transceivers had broken
> down, as we could not hear any other signals on any band, except our
> ground wave link. Pedro is located within a couple of miles of my
> home QTH, and I could hear him very well, and of course, he heard me
> very well too, but we both simply could not pick up a single short
> wave station via skywave, an unmistakeable sign of a total
> ionospheric absorption event, the so called MOSS DILLINGER effect, or
> total short wave blackout...
>
> The higher frequencies started to come back first, just as the book

> says it should happen, and we both CO2DT and CO2KK had a nice QSO via
> 40 meter band groundwave that was absolutely QRM free thanks to the
> short wave blackout!!! According to my solar observations done early
> Saturday morning, there are chances for more solar flares to happen
> during the next two days or so....
>
> Item two: CO8DM Douglas a very enthusiastic young Cuban radio amateur
> had his first 6 meter band contacts with Europe, making a lot of
> European 50 megaHertz enthusiasts very happy indeed... So far CO2OJ,
> CO8LY, CO8DM and yours truly CO2KK are the only Cuban radio amateurs
> that have communicated with European stations on the magic 6 meter
> band.
>
> Item three: The most popular topic during the year 2001 here at Dxers
> Unlimited was,without any doubts the REGENERODYNE RECEIVER, so far I
> have learned about several completely finished radios and many in the
> works... For 2002... be ready for an all-solid-state version of this
> unique receiver!!!
>
> Item four: antenna section of Dxers Unlimited, with more information
> about the ferrite rod loop transmitting antenna experiments, and as
> always at the end of the show our exclusive and not copyrighted HF
> plus 6 meters propagation update and forecast...
>
> Stay tuned for more radio hobby related information coming to you
> from Radio Havana Cuba.
>
> This is the weekend edition of Dxers Unlimited,and here is our very
> popular antenna topics section amigos: Yes, the experimental ferrite
> rod transmitting loop antenna experiments continue... Here is some
> data to fuel up your experiments too... the length of the ferrite rod
> that seems to work very nicely here is 500 millimeters, of half a
> meter... The rod was made by glueing together several 10 millimeters
> diameter rods, using epoxy glue that was mixed very well with powder
> from a broken ferrite rod, in other words the glue had a high content
> of ferrite material in it, thus helping to provide a much better
> coupling between the rods... I used very little glue, and then had
> the rods placed inside a length of PVC pipe, so that the joints will
> not be under mechanical stress.
>
> The wire used for winding the coil was no 16.pvc insulated, of the
> type used for house wiring, and the number of turns was changed
> during the experiments, as well as the spacing within turns. So far,
> my ferrite rod transmitting loop seems to work very nicely on the 40
> meter amateur band, admitting up to around 10 watts of CW power or
> some 20 watts peak SSB power, before strange things begin to
> happen!!!
>
> At the 20 watts PEP SSB level, my station can be heard during the
> daytime at distances of up to 500 to 700 kilometers via the near

> vertical incidence skywave propagation, and reports are very good
> indeed. The experimental antenna is built on a plywood square to
> which I have attached a copper metal plate that acts as the other
> half-turn of the loop. I use two capacitors, one for tuning the loop
> and the other for optimizing the matching from the antenna to the
> radio.... It seems like it would be possible to use a smaller length
> ferrite rod for the higher amateur bands, but that's a next year
> experiment...
>
> In the meantime, the 40 meter band antenna will be rebuilt so that it
> can be used as a permanent system at my ham radio station during the
> summer thunderstorm season... Using an indoor antenna is a lot safer
> than connecting your rig to the big external antenna when T-storms
> are hovering nearby... Of course, I don't recommend operating a radio
> at all when a thunderstorm is near, but if you are in the middle of
> an emergency, keeping the link open with the indoor ferrite rod
> transmitting antenna can be your only option...
>
> Item four: More about antennas... The grounded vertical folded
> monopole antenna should become more and more popular among radio
> amateurs that already have a tower or mast installed at their
> stations... Want to know why? Well, as AM broadcast band stations
> have learned now, the grounded vertical folded monopole antenna is
> very efficient, has a lot of bandwidth, is easy to feed, and also
> provides complete isolation from other antennas installed on it. So
> yes, you may keep your Yagi beams up the tower, and by adding a set
> of wires and some fiberglass insulators, plus ground radials, you can
> feed the tower as a very nice vertical for the lower bands... You can
> even follow what broadcasters do to use the tower for two stations at
> the same time, and have the grounded vertical folded monopole antenna
> operating on two different amateur bands with an automatic switchover
> system...
>
> By the way that's one of the upcoming projects for 2002 -- turning my
> 6 meters high tower that supports my omnidirectional high gain 2
> meter band vertical, into an effective vertical for the 20 and 17
> meter bands...
>
> If you want to learn more about both the ferrite rod transmitting
> antenna, and the grounded folded monopole vertical antennas just drop
> me an e-mail to arnie@radiohc.org amigos, and I will be happy to send
> you several computer files with data about this interesting antenna
> systems.
>
> This is Radio Havana Cuba, the name of the show is Dxers Unlimited,
> and yes we do QSL one hundred percent here... send your QSL requests
> Via Air Mail to Arnie Coro, Radio Havana Cuba, Havana, Cuba, and Via
> e-mail to arnie@radiohc.org amigos!!!
>
> Now item five: You have questions and Arnie answers them... here is

> today's question:
>
> Arnie, what's the minimum power that an amateur radio station should
> run to provide reliable day to day communications??
>
> Well my friends who asked this tough question, this one I left for
> the end of the year show for sure, as it is a really difficult one to
> answer, and I would not like to generate a lengthy discussion on this
> topic...
>
> Here is my advice: For an HF, that is a short wave bands amateur
> radio station, the minimum power for reliable day-to-day
> communications that I would recommend is 25 watts, with 50 watts
> maybe a better option. You won't need 100 watts most of the time, but
> commercial rigs tend to be made using power output levels in the 25
> watts or 100 watts range. You can make a lot of ham radio contacts
> when conditions are good by running a 5 watts QRP rig, and you will
> enjoy QRP or low power operation a lot, but again, if you need to
> communicate even under difficult propagation conditions, then your
> minimum power option is 25 watts, with 50 watts having an extra 3 dB
> edge helping you...
>
> Of course, if you have an efficient antenna system, especially
> designed for the type of communications you want, then your chances
> of communicating are a lot better. In our experience here in Cuba
> during the hurricane season, we have found that installing special
> near vertical incidence skywave antennas, and using transceivers
> running as little as 10 watts, we can provide really effective
> emergency communications using battery power rigs that won't drain
> the batteries in just a few transmissions... And remember that the
> International Telecommunications Union advice is to use the minimum
> power required to keep the communications link working, in order to
> help reduce interference to other users of the radio sp_ctrum!!!
>
> This is Dxers Unlimited's weekend edition, and here is item six:
> What's coming for 2002... Well amigos, a lot of good news! I have
> several antenna projects, at least two receiver projects, and a lot
> of practical advice for both newcomers and experts regarding our
> wonderful hobby. More and more radio enthusiasts are linking
> computers to radios with very succesful results, and a lot of new
> computer software is being written these days that will further
> enhance our hobby...
>
> Two good examples are the multimode soundcard software that let you
> operate on many different digital modes using your computer sound
> card as a very sophisticated and fast signal processor, and the use
> of computer software to design antenna systems with unique
> characteristics... Among the most recent developments are the use of
> very high speed morse code transmissions for working meteor scatter
> contacts and at the other end of the spectrum, the use of extra slow

> CW to enhance signal reception possibilities on the low frequency
> bands... We may soon see during the year 2002 more nations making the
> low frequency amateur bands available to their amateur radio
> operators, and the continuing shift to low-speed Morse code tests
> even for the most advanced class of amateur radio licenses...
>
> And now just before going QRT, here is Arnie Coro's Dxers Unlimited's
> HF propagation update and forecast: Be ready for some special
> propagation conditions during the next 48 to 72 hours -- we may see
> aurora borealis and aurora australis at higher latitudes, more solar
> flares, geomagnetic disturbances and unique F2 layer MUF enhancements
> that will make worldwide contacts on the 6 meter band possible during
> the next five to seven days.
>
> So, the end of 2001 finds the solar cycle in an upswing, and
> scientists happy to continue to make the best observations ever of
> solar activity during this second peak of cycle 23...
>
> Happy New Year 2002 for all and keep listening to Dxers Unlimited,
> your favorite radio hobby program coming to you from Radio Havana
> Cuba!!!
>
> Arnie Coro CO2KK
> Havana, Cuba
> December 29, 2001
>
> Postal address:
> Arnie Coro, "Dxers Unlimited"
> Radio Havana Cuba, Havana, CUBA
> e-mail: arnie@radiohc.org
>
> --
>
> http://www.radiohc.org

23. Re: How NOT to cut a piece of copper tubing

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 21:21:17 UTC
From: Your Friend Bill <"Remove The NO In The Reply To Address"@coqui.net>
Message-ID: <3C32284D.B49146F6@coqui.net>
Source record: 47665

"Clyde R. Shappee" wrote:

> I thought he was about to one-up my torsion of the testicle story....
>
> One cannot be too careful.
>
> Best wishes to all for a safe new year.
>
> Clyde
>

Most of us tinkerers think we are smarter than our power tools. I'm glad Mr. Poster suffered minimal damage but its another reminder and we should take heed. One feels real stupid in the emergency room explaining these things.
-Bill

24. Re: DXERS UNLIMITED SATURDAY, DECEMBER 29, 2001 Arnie Coro CO2KK

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 21:24:16 UTC
From: Your Friend Bill <"Remove The NO In The Reply To Address"@coqui.net>
Message-ID: <3C322900.7B5CD0E5@coqui.net>
Source record: 47666
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.shortwave,uk.radio.amateur

Loretta Shuster wrote:
>
> You were quite right about 6 meters for the last 5 days. Condx have been
> terrific from just my mobile station with a 1/4 wave vertical and 100 watts
> in Virginia USA.
>
> I've been working Europe and the Carribean quite a bit. Even heard a JY9
> (Jordan) today on 6 meters but the pileups were too much for my little
> station.

Superb. I'm a TV/FM=DX monitor in Puerto Rico and am not catching any
signs of the openings. Can you suggest any times that you see these
openings?
-Bill WX4A

25. Re: OT : CW Bandwidth

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-01 23:53:30 UTC
From: Terry <tsanford@nf.sympatico.ca>
Message-ID: <3C324BFA.F2F93E1B@nf.sympatico.ca>
Source record: 47667

Mark Allread wrote:
>
> On Fri, 28 Sep 2001 23:55:22 +0100, "Reg Edwards" <g4fgq.regp@btinternet.com> wrote:
> >
> > Their interpretation followed by your's of their interpretation
> > makes what follows not very convincing.
>
> That sentence is unparsable.

AND, possibly un-understandable!

26. Re: How NOT to cut a piece of copper tubing

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-02 00:17:24 UTC
From: Eike Lantzsch <eikelan@gmx.net>
Message-ID: <slrna34kck.cu1.eikelan@ID-77364.user.dfncis.de>
Source record: 47668

Frank Dresser wrote:
> >From: Eike Lantzsch eikelan@gmx.net
>
> >The lamentable accident aside - I doubt that dimming halogen bulbs
> >extend their lifetime. The lifetime of halogen bulbs is AFAIK extended
> >compared to normal bulbs by means of the halogen cycle, which
>
[snip]
>
> Here's a discussion of halogen bulbs and lamp dimmers:
>
> http://www.misty.com/people/don/bulb1.html#hb
>
> Frank Dresser

Thanks Frank!

Regards, Ike

27. Re: DXERS UNLIMITED SATURDAY, DECEMBER 29, 2001 Arnie Coro CO2KK

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-02 01:31:08 UTC
From: Loretta Shuster <simpent@ntelos.net>
Message-ID: <nptY7.27381$a56.26322@atlpnn01.usenetserver.com>
Source record: 47669
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.shortwave,uk.radio.amateur

I worked KP4 Sunday at about 1500Z from my mobile and 100 watts with a 1/4 wave vertical.

Europe has been coming in from 1300Z at the earliest until 1800Z or so at the latest. The times vary somewhat depending on condx each day.

I've heard some Carribean stations working Europe so just be on the lookout.

73 de N4SLR, Frank from a friend's computer.
"Your Friend Bill" <"Remove The NO In The Reply To Address"@coqui.net> wrote in message news:3C322900.7B5CD0E5@coqui.net...
> Loretta Shuster wrote:
> >
> > You were quite right about 6 meters for the last 5 days. Condx have been
> > terrific from just my mobile station with a 1/4 wave vertical and 100 watts
> > in Virginia USA.
> >
> > I've been working Europe and the Carribean quite a bit. Even heard a JY9
> > (Jordan) today on 6 meters but the pileups were too much for my little
> > station.
>
> Superb. I'm a TV/FM=DX monitor in Puerto Rico and am not catching any
> signs of the openings. Can you suggest any times that you see these
> openings?
> -Bill WX4A
>

28. Re: How NOT to cut a piece of copper tubing

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-02 03:49:36 UTC
From: whagen6@cs.com
Message-ID: <20020101224936.10220.00001979@mb-fh.news.cs.com>
Source record: 47670

unless you're Tim (the toolman) Talor

29. Serenade software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-02 07:44:52 UTC
From: "J.F. FOURCADIER" <jf.fourcadier@wanadoo.fr_NOSPAM>
Message-ID: <a0udn4$s2l$1@wanadoo.fr>
Source record: 47671

Hello to All

I have downloaded the student version of the Serenade software on the Ansoft website. This software seems
interesting and very powerful.

I'm wondering if it's possible to simulate low frequency circuits with this software (AF amplifier,
preemphasis cells, ...). The examples I have found within the package are microwave circuits with specific
functions and parts like microwave ports and lines. Where can I get more information and examples ?

Thank you for your help and happy new year !

73 de F4DAY

Jean-Fran&#65533;ois FOURCADIER
website: http://perso.wanadoo.fr/jf.fourcadier

30. need 74LS184

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-02 15:05:12 UTC
From: Xu <salers@hamal.freemail.ne.jp>
Message-ID: <a0v7i9qeo1@mail.cn99.com>
Source record: 47672

Hi!
Habppy new year!I need 74LS184 ,anyone can help me?
73!1 Xu

31. electromagnet tuning fork use

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-02 19:30:53 UTC
From: c a l a n d e <rcalandeNOT@earthlink.net>
Message-ID: <3C335FD7.264FBA25@earthlink.net>
Source record: 47673

Iï¿½m trying to find out how an electromagnetic driven tuning fork would have been used in a radio.

This tuning fork was part of a huge collection of old radio parts that was received from a family friend in the mid 1960s. I left the tuning fork with a teacher in the early seventies.

The tuning fork was packaged in an aluminum can and included a pair of driver and pickup electromagnets attacked to the rectangular fork. When you drove it at its resonant frequency you got a nice pure sine wave output. I never truly understood how these tuning forks were ever used as part of a radio because of their low frequency.

Does anyone have any idea about hoe these tuning forks might have been used? Iï¿½ve tried to search the Internet for similar devices and closest thing Iï¿½ve found is an optical chopper.

--
ï¿½ r a y m o n d ï¿½ p a u l ï¿½ c a l a n d e ï¿½
ï¿½ t o r e p l y r e m o v e t h e "NOT" ï¿½

32. Re: electromagnet tuning fork use

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-02 20:50:37 UTC
From: Gary Glaenzer <nobulltrans@irtc.net>
Message-ID: <voKY7.547$7d.54657108@news2.randori.com>
Source record: 47674

4 pins in a paralellogram configuration?

any markings on it?

sounds like a Motorola 'vibrosender' or 'vibrosponder' "Private Line" reed

they were used to tone-modulate the radio so that several users could share a frequency and not have to listen to each others' traffic; each system would have it's own 'Private Line' frequency. the 'PL' would be disabled in the receiver when the microphone was taken off-hook.

This term caused created untold grief for us in the service end, the salesman would get the customer fixated on the 'private' aspect of it and then the first time the customer picked up the microphone in his truck and heard someone else on 'his private frequency' the crap wouopd hit the fan

frequencies ranged from about 85 Hz to almost 200, the 'original' was 100 Hz, later coded '1Z', and the frequencies went up and down in increments of 3.5%: 93.4, 96.7, 100, 103.5, 107.1, etc

there were 2 styles, the TU-217/TU333 used in the tube-type up thru Motrac style, and the TLN-6709/TLN-6824 used in later units (Mocom 70, Micor, Mitrek, Maxar, Moxy)

the TU units were about 3 x 1 x 1/2 inches, all metal construction and copper or brass colored, the later ones were about 1.25 by 0.75 by 0.50 inches and were plastic-cased with metal sides held on by 4 rivets in the corners.

hope this helps!

G

"c a l a n d e" <rcalandeNOT@earthlink.net> wrote in message news:3C335FD7.264FBA25@earthlink.net...
> I'm trying to find out how an electromagnetic driven tuning fork would
> have been used in a radio.
>
> This tuning fork was part of a huge collection of old radio parts that
> was received from a family friend in the mid 1960s. I left the tuning
> fork with a teacher in the early seventies.
>
> The tuning fork was packaged in an aluminum can and included a pair of
> driver and pickup electromagnets attacked to the rectangular fork. When
> you drove it at its resonant frequency you got a nice pure sine wave
> output. I never truly understood how these tuning forks were ever used

> as part of a radio because of their low frequency.
>
> Does anyone have any idea about hoe these tuning forks might have been
> used? I've tried to search the Internet for similar devices and closest
> thing I've found is an optical chopper.
>
>
> --
> . r a y m o n d . p a u l . c a l a n d e .
> . t o r e p l y r e m o v e t h e "NOT" .
>

33. Re: electromagnet tuning fork use

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-02 22:39:21 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c338af6.830379@news.freeserve.net>
Source record: 47675

In a Trio tranciever by any chance?.
IIRC it was used as a feedback path in an audio osc. Noise at the
output of the AF amp was fed into the drive coil and the 'tongs' were
inductivly coupled back to the input. After a few seconds the thing
was rattling nicely.

On Wed, 02 Jan 2002 19:30:53 GMT, c a l a n d e
<rcalandeNOT@earthlink.net> wrote:

>
>I m trying to find out how an electromagnetic driven tuning fork would
>have been used in a radio.
>
>This tuning fork was part of a huge collection of old radio parts that
>was received from a family friend in the mid 1960s. I left the tuning
>fork with a teacher in the early seventies.
>
>The tuning fork was packaged in an aluminum can and included a pair of
>driver and pickup electromagnets attacked to the rectangular fork. When
>you drove it at its resonant frequency you got a nice pure sine wave
>output. I never truly understood how these tuning forks were ever used
>as part of a radio because of their low frequency.
>
>Does anyone have any idea about hoe these tuning forks might have been
>used? I ve tried to search the Internet for similar devices and closest
>thing I ve found is an optical chopper.
>
>
>--
> r a y m o n d p a u l c a l a n d e
> t o r e p l y r e m o v e t h e "NOT"

34. WTB 5-pin sockets for 803 tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-02 23:48:34 UTC
From: mjsilva697@earthlink.net
Message-ID: <27085883.0201021548.5c265bff@posting.google.com>
Source record: 47676
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hi all,

I'm looking for 2 or 3 large 5-pin sockets for 803 tubes. Anybody
have such critters? Thanks for checking.

73,
Mike, KK6GM

35. different frequencies through a wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-02 23:49:34 UTC
From: Kurt Stocklmeir <kurtstocklmeir@worldnet.att.net>
Message-ID: <01c193e1$8524f140$6f284f0c@oemcomputer>
Source record: 47677

I am trying to understand how electrons flow through a wire. Many frequencies can travel through a wire and not interfere a lot with each other. Different frequencies will change direction at different times. Different frequencies can be going in different directions. I think a lot of current could be going in 1 direction and it tends not to cause trouble for electrons changing directions.

Thank you for answers.

36. MAX 202

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-02 23:58:35 UTC
From: jwodell@provide.net
Message-ID: <3c339e7f.2163015@news.provide.net>
Source record: 47693

Anyone ever use a Maxim 202 to go from TTL to RS232?
Sounds a little too good to be true!!!

Thanks

73 jerry w8gnd

37. Re: DXERS UNLIMITED SATURDAY, DECEMBER 29, 2001 Arnie Coro CO2KK

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 00:16:18 UTC
From: Trevor Day <Trev@southwestuk.demon.co.uk>
Message-ID: <H+bytvGSL6M8EwrD@southwestuk.demon.co.uk>
Source record: 47678
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.shortwave,uk.radio.amateur

In article <3C322900.7B5CD0E5@coqui.net>, Your Friend Bill <"Remove The
NO In The Reply To Address"@coqui.net> writes
>Loretta Shuster wrote:
>>
>> You were quite right about 6 meters for the last 5 days. Condx have been
>> terrific from just my mobile station with a 1/4 wave vertical and 100 watts
>> in Virginia USA.
>>
>> I've been working Europe and the Carribean quite a bit. Even heard a JY9
>> (Jordan) today on 6 meters but the pileups were too much for my little
>> station.
>
>Superb. I'm a TV/FM=DX monitor in Puerto Rico and am not catching any
>signs of the openings. Can you suggest any times that you see these
>openings?
>-Bill WX4A
>
The Caribbean has been open from the UK on 6m daily from around 1130Z
for several days now Bill. You should be able to hear Band I TV sigs
from Eu from around this time.
gl Trev G3ZYY

PS, wkd CO8DM this lunchtime for a new one on 6m :)))
--
Trevor Day

38. Re: DXERS UNLIMITED SATURDAY, DECEMBER 29, 2001 Arnie Coro CO2KK

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 00:50:27 UTC
From: Your Friend Bill <"Remove The NO In The Reply To Address"@coqui.net>
Message-ID: <3C33AAD3.4D0B4460@coqui.net>
Source record: 47680
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.shortwave,uk.radio.amateur

Trevor Day wrote:
>
> >
> The Caribbean has been open from the UK on 6m daily from around 1130Z
> for several days now Bill. You should be able to hear Band I TV sigs
> from Eu from around this time.
> gl Trev G3ZYY
>
> PS, wkd CO8DM this lunchtime for a new one on 6m :)))
> --
> Trevor Day

Thanks for the info. Will give a serious listen tomorrow morning.
-Bill

39. MFJ 259 Self service

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 01:51:34 UTC
From: maildoc <maildoc@ananzi.co.za>
Message-ID: <GOOY7.13872$CS6.4447034@typhoon.jacksonville.mediaone.net>
Source record: 47682

Need help with service manual or service note on what pots to tweak.The old unit is getting a bit fiddly and no longer shows an swr 1 at 50 ohms termination across the upper ranges.If youve serviced your own or know what to do,please reply. Thank you
MOT

40. NEC C1600 transistor info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 01:51:36 UTC
From: rexa*non*spam*@dnai.com
Message-ID: <ctd73usu8r8oamjolickjtanih9hetf69v@4ax.com>
Source record: 47681

I'm reverse engineering an RF device from the late 80's. It has two metal can's that I think are NPN silicon transistors. They have the following printed on 3 lines: NEC C1600 E88.

Can anyone help with basic info on these devices. I think they are NPN, with emitter near the metal can transistor tab and pins in order of E B C. The oldest NEC databooks I have do not list this one.

-Rex, KK6MK

41. Re: NEC C1600 transistor info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 02:05:36 UTC
From: Gary Glaenzer <nobulltrans@irtc.net>
Message-ID: <Q%OY7.19$x9b.983165@news2.randori.com>
Source record: 47683

'E88' would be May of 88 date code

can't help with the type #, sorry

"Rex Allers" <rexa*non*spam*@dnai.com> wrote in message
news:ctd73usu8r8oamjolickjtanih9hetf69v@4ax.com...
> I'm reverse engineering an RF device from the late 80's. It has two
> metal can's that I think are NPN silicon transistors. They have the
> following printed on 3 lines: NEC C1600 E88.
>
> Can anyone help with basic info on these devices. I think they are
> NPN, with emitter near the metal can transistor tab and pins in
> order of E B C. The oldest NEC databooks I have do not list this
> one.
>
> -Rex, KK6MK

42. Re: NEC C1600 transistor info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 02:23:16 UTC
From: Your Friend Bill <"Remove The NO In The Reply To Address"@coqui.net>
Message-ID: <3C33C094.ED3E6D98@coqui.net>
Source record: 47684

Gary Glaenzer wrote:
>
> 'E88' would be May of 88 date code
>
> can't help with the type #, sorry
>
> "Rex Allers" <rexa*non*spam*@dnai.com> wrote in message
> news:ctd73usu8r8oamjolickjtanih9hetf69v@4ax.com...
> > I'm reverse engineering an RF device from the late 80's. It has two
> > metal can's that I think are NPN silicon transistors. They have the
> > following printed on 3 lines: NEC C1600 E88.
> >
> > Can anyone help with basic info on these devices. I think they are
> > NPN, with emitter near the metal can transistor tab and pins in
> > order of E B C. The oldest NEC databooks I have do not list this
> > one.
> >
> > -Rex, KK6MK

Is this roughly a 10 watt UHF transistor? That would be a 2SC1600.
-Bill

43. Re: different frequencies through a wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 03:03:09 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C33C9ED.67C06A72@ieee.org>
Source record: 47685

Electrons flow through a wire very slowly, I think like a centimeter in 13 seconds if I remember correctly.

The electric field caused by the current changes nearly the speed of light, depending on the conductor and other factors. Some cables propagate at .6 times the speed of light.

Many frequencies can be transmitted through the wire because it is a linear system. The different frequencies are additive.

You have much to learn and much to read.

Check out the ARRL handbook for starters.

Clyde

Kurt Stocklmeir wrote:

> I am trying to understand how electrons flow through a wire. Many
> frequencies can travel through a wire and not interfere a lot with each
> other. Different frequencies will change direction at different times.
> Different frequencies can be going in different directions. I think a lot
> of current could be going in 1 direction and it tends not to cause trouble
> for electrons changing directions.
>
> Thank you for answers.

44. Want Boonton 91-12 probe for 91DA RF Voltmeter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 03:34:11 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <u37948n5u8fvcc@corp.supernews.com>
Source record: 47679
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

Or if you have a schematic of one I can duplicate?
I just bought the RF Voltmeter minus the probe.

Doug N4IJ

45. Re: electromagnet tuning fork use

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 03:38:01 UTC
From: "John D. Farr" <jfarr62@home.com>
Message-ID: <tmQY7.14003$LQ1.5922862@news2.nash1.tn.home.com>
Source record: 47686

General Radio used what is called a "microphone hummer" as a one kilohertz oscillator in the Type 650-A impedance bridge. They also sold a Type 723 "Vacuum-Tube Fork", which is essencially a fixed frequency oscillator used for test and measurement. the 723-C was 1 KHz and the 723-D was 400 Hz. These are listed in the 1956 GR catalog, which is the only one I have. I have no idea whatever if other companies made these type devices and also have no idea how one of these rascals could be used in a radio.

If you would like more info, the 1956 GR catalog and the manual for the Type 650-A impedance bridge is available for download at http://bama.sbc.edu/gr.htm .

One other note. I bought a 650A at a hamfest for next to nothing. I could tell from the filth that it had been treated badly. All of the controls were frozen and some of the phenolic shafts were broken. I cleaned it up and put the power to it and it fired right up. It is one rugged piece of gear. I have to slap it on the side sometimes to make the oscillator start!

Hope this helps.

John
KC4ZXX

"c a l a n d e" <rcalandeNOT@earthlink.net> wrote in message news:3C335FD7.264FBA25@earthlink.net...
>
> I'm trying to find out how an electromagnetic driven tuning fork would
> have been used in a radio.
>
> This tuning fork was part of a huge collection of old radio parts that
> was received from a family friend in the mid 1960s. I left the tuning
> fork with a teacher in the early seventies.
>
> The tuning fork was packaged in an aluminum can and included a pair of
> driver and pickup electromagnets attacked to the rectangular fork. When
> you drove it at its resonant frequency you got a nice pure sine wave
> output. I never truly understood how these tuning forks were ever used
> as part of a radio because of their low frequency.
>
> Does anyone have any idea about hoe these tuning forks might have been
> used? I've tried to search the Internet for similar devices and closest
> thing I've found is an optical chopper.
>
>
> --
> . r a y m o n d . p a u l . c a l a n d e .

> . t o r e p l y r e m o v e t h e "NOT" .

46. Re: NEC C1600 transistor info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 04:16:42 UTC
From: rexa*non*spam*@dnai.com
Message-ID: <lnm73u0trhdcf903l63ucu2i6g8jcnc4vb@4ax.com>
Source record: 47687

On Wed, 02 Jan 2002 22:23:16 -0400, Your Friend Bill <"Remove The NO
In The Reply To Address"@coqui.net> wrote:
>> > following printed on 3 lines: NEC C1600 E88.
>
>Is this roughly a 10 watt UHF transistor? That would be a 2SC1600.
>-Bill

I don't think so. I think it is two output stages to a mw-level
oscillator. These are smaller than TO-5. I could look up the
package if necessary. About the size of TO-5 but shorter.

They are clearly labled NEC. I doubt if this directly translates
into the 2SC scheme. Somebody tell me if I'm wrong here.

-Rex

47. Re: NEC C1600 transistor info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 04:31:59 UTC
From: Your Friend Bill <"Remove The NO In The Reply To Address"@coqui.net>
Message-ID: <3C33DEBF.863267B2@coqui.net>
Source record: 47688

Rex Allers wrote:
>
> On Wed, 02 Jan 2002 22:23:16 -0400, Your Friend Bill <"Remove The NO
> In The Reply To Address"@coqui.net> wrote:
> >> > following printed on 3 lines: NEC C1600 E88.
> > >
> > >Is this roughly a 10 watt UHF transistor? That would be a 2SC1600.
> > >-Bill
> >
> > I don't think so. I think it is two output stages to a mw-level
> > oscillator. These are smaller than TO-5. I could look up the
> > package if necessary. About the size of TO-5 but shorter.
> >
> > They are clearly labled NEC. I doubt if this directly translates
> > into the 2SC scheme. Somebody tell me if I'm wrong here.
> >
> > -Rex

Well, NEC made a 2SC1600. I did a quick search on Google - there were quite a few listings and I didn't dig very deep. Punch in 2SC1600 and see if you can find something via that route. On many Japanese transistors the markings are this way (add the 2S) but thats no guarantee.
GL,
Bill

48. Re: Followup NEC C1600 transistor info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 05:09:42 UTC
From: Your Friend Bill <"Remove The NO In The Reply To Address"@coqui.net>
Message-ID: <3C33E796.40032698@coqui.net>
Source record: 47689

```
Your Friend Bill wrote:
>
> Rex Allers wrote:
> >
> > On Wed, 02 Jan 2002 22:23:16 -0400, Your Friend Bill <"Remove The NO
> > In The Reply To Address"@coqui.net> wrote:
> > >> > following printed on 3 lines: NEC C1600 E88.
> > >
> > >Is this roughly a 10 watt UHF transistor? That would be a 2SC1600.
> > >-Bill
> >
> > I don't think so. I think it is two output stages to a mw-level
> > oscillator. These are smaller than TO-5. I could look up the
> > package if necessary. About the size of TO-5 but shorter.
> >
> > They are clearly labled NEC. I doubt if this directly translates
> > into the 2SC scheme. Somebody tell me if I'm wrong here.
> >
> > -Rex
>
> Well, NEC made a 2SC1600. I did a quick search on Google - there were
> quite a few listings and I didn't dig very deep. Punch in 2SC1600 and
> see if you can find something via that route. On many Japanese
> transistors the markings are this way (add the 2S) but thats no
> guarantee.
> GL,
> Bill

Here's what I found on the 2SC1600:
TO-46/EBC case. TO-46 is about 0.2" in diameter, flatter profile than a
TO-5
Vcbo 40
Vceo 20
Vebo -
ICa 0.25
Pcw 4.375
```

49. at what point will a germanium detector 'detect'?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 05:37:11 UTC
From: hexter@blazenet.net
Message-ID: <u37rg7dj75jn55@corp.supernews.com>
Source record: 47690

I must phrase my question properly so as not to sound dumb. I would like to detect amplitude modulation using a germanium diode and an audio amplifier chain that can produce 80 db of audio gain to drive a set of headphones. I would like to connect the detector to the output of a narrow bandwidth preamplifier in the 15.5 mhz region (bandwidth 10khz at 10 db down). The preamp has a 100 ohm resistor to ground to set it's output impedance. I guess the best way to ask would be this, At what minimum dbm or even dbv (i can handle the math) referanced at 50 ohms can I expect to recover decent distortion free audio? Distortion free taken as meaning less than 5% THD on normal vocal audio frequencies.

This puzzels me, as I don't know how much drive it would take to get conduction, and additionally, how far into conduction I would have to go to get decent recovery of amplitude modulation.

BTW, the preamp is homebrew using 6AJ5 valves, and is producing about 40 Db gain looking from 50 ohm input to the 50 ohm output connector. (Both BNC)

50. Re: at what point will a germanium detector 'detect'?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 05:49:51 UTC
From: Your Friend Bill <"Remove The NO In The Reply To Address"@coqui.net>
Message-ID: <3C33F0FF.E491307C@coqui.net>
Source record: 47691

gudmundur wrote:
>
> I must phrase my question properly so as not to sound dumb. I would
> like to detect amplitude modulation using a germanium diode and an audio
> amplifier chain that can produce 80 db of audio gain to drive a set
> of headphones. I would like to connect the detector to the output of a
> narrow bandwidth preamplifier in the 15.5 mhz region (bandwidth 10khz
> at 10 db down).

I can't answer your question, but the nature of this project has me
curious. What is it that you are building??? Seems like a one-channel
radio of some sort?
-Bill

51. Re: NEC C1600 transistor info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 10:58:27 UTC
From: budgie <budgie@nowhere.cantech.net.au>
Message-ID: <3c3438e3.1055947@news.cantech.net.au>
Source record: 47692

On Thu, 03 Jan 2002 00:31:59 -0400, Your Friend Bill <"Remove The NO
In The Reply To Address"@coqui.net> wrote:

>Rex Allers wrote:
>>
>> On Wed, 02 Jan 2002 22:23:16 -0400, Your Friend Bill <"Remove The NO
>> In The Reply To Address"@coqui.net> wrote:
>> >> > following printed on 3 lines: NEC C1600 E88.
>> >
>> >Is this roughly a 10 watt UHF transistor? That would be a 2SC1600.
>> >-Bill
>>
>> I don't think so. I think it is two output stages to a mw-level
>> oscillator. These are smaller than TO-5. I could look up the
>> package if necessary. About the size of TO-5 but shorter.
>>
>> They are clearly labled NEC. I doubt if this directly translates
>> into the 2SC scheme. Somebody tell me if I'm wrong here.

Well, NEC really stands for "never_entirely_compatible" so you can't
presume much. Having said that, the implied_2S rule is almost
inviolate in Japanese product. This doesn't preclude packaging
variations.

52. Re: MAX 202

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 12:01:45 UTC
From: John Hague <John.Hague@philips.com>
Message-ID: <3C344829.42475553@philips.com>
Source record: 47694

"Jerry W. O'Dell" wrote:

> Anyone ever use a Maxim 202 to go from TTL to RS232?
> Sounds a little too good to be true!!!
>
> Thanks
>
> 73 jerry w8gnd

Jerry

I used the MAX232 a few years ago to convert between TTL and RS232
levels
and it worked a treat.

Regards

John, G4GOY

53. Help with data for fujitsu PLL chip MB87080A, made in 1994 please

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 14:11:00 UTC
From: vk6tt@optusnet.com.au
Message-ID: <3c3464e8.2328701@news.optusnet.com.au>
Source record: 47695
Cross-posted to: rec.radio.amateur.homebrew,aus.electronics

HI all,

I have a quantity of Fujitsu PLL chips made in 1994, the MB87080A.
Unfortunately the Fujitsu site doesn't have data for chips back then.
Does anybody have an old printed data book or other source of data
with the information please?

Thanks in advance
Richard

54. Re: MAX 202

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 15:30:45 UTC
From: k7mem@myrealbox.com
Message-ID: <270a577d.0201030730.c85757d@posting.google.com>
Source record: 47696

jwodell@provide.net (Jerry W. O'Dell) wrote in message
news:<3c339e7f.2163015@news.provide.net>...
> Anyone ever use a Maxim 202 to go from TTL to RS232?
> Sounds a little too good to be true!!!
>
> Thanks
>
> 73 jerry w8gnd

These Maxim devices have been around for many years now and they work
as advertised. What is it that sounds to good?

The MAX202 is very similar to the MAX232, in that they are both dual
TTL to RS232 translators. The MAX202 uses smaller capacitors, 0.1 uF, for
the internal charge pump but has a slower data rate, 20 kbps. The
MAX232 uses larger capacitors, 1 uF, and can work at 120 kbps.
If you need the speed, go with the MAX232.

If you want a list of the various Maxim RS-232 Line Driver/Receivers
try:

http://para.maxim-ic.com/compare.asp?Fam=RS232&Tree=Interface&HP=Interface.cfm

You can sort on the feature that suites your needs.

--
Martin E. Meserve, K7MEM

I respond to news groups and E-Mail on my own time and therefore
my responses may not be as timely as you, or I, would like them to
be. If I seem to be ignoring you, send me another E-Mail to jog my
memory. Opinions are my own and do not reflect the opinions of my
employer.

55. Re: electromagnet tuning fork use

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 15:31:32 UTC
From: mikea@mikea.ath.cx
Message-ID: <oP_Y7.11814$xU6.1757331529@newssvr17.news.prodigy.com>
Source record: 47597

John D. Farr <jfarr62@home.com> wrote:
: General Radio used what is called a "microphone hummer" as a one kilohertz
: oscillator in the Type 650-A impedance bridge. They also sold a Type 723
: "Vacuum-Tube Fork", which is essencially a fixed frequency oscillator used
: for test and measurement. the 723-C was 1 KHz and the 723-D was 400 Hz.
: These are listed in the 1956 GR catalog, which is the only one I have. I
: have no idea whatever if other companies made these type devices and also
: have no idea how one of these rascals could be used in a radio.

: If you would like more info, the 1956 GR catalog and the manual for the Type
: 650-A impedance bridge is available for download at
: http://bama.sbc.edu/gr.htm .

: One other note. I bought a 650A at a hamfest for next to nothing. I could
: tell from the filth that it had been treated badly. All of the controls were
: frozen and some of the phenolic shafts were broken. I cleaned it up and put
: the power to it and it fired right up. It is one rugged piece of gear. I
: have to slap it on the side sometimes to make the oscillator start!

You have just reminded me of one of my military-service horrors:
a modem that used mechanical resonators, and which sometimes had
to be whacked (or booted, depending on where in the rack it was
mounted) to get them to ring. These were rugged pieces of gear,
because they had to be -- to survive all the pounding.

It was a mercy to get Lenkurt 28C modems not long after I met
those horrors. The Lenkurt was tiny, just as fast, had better
"eye" patterns, and Just Plain Worked.

--
$SUPPLIER said "next day delivery". Unfortunately, they didn't
specify which day it would be next to.
-- James Cort in the Monastery

56. useing an old phone for parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 15:51:24 UTC
From: Johnathon and Courtney Chihonik <chihonjcnospam@mb.sympatico.ca>
Message-ID: <3C347DFB.9B46486F@mb.sympatico.ca>
Source record: 47598

Hey there all, recently my (extremly cheap) Curtiss cordless phone bit the bullet and being the curious little monkey i am, of course, i tore it open almost immediatly.
Unfortunatly, my electronics experience ended at the end of grade XII (and that was 4years ago). so now that its apart i have no clue what im looking at. Anyways, i figured that a fm cordless phone would provide me with a bunch of basic radio parts being that it is a transmitter and a reciever for 900mhz. I assumed that there would be some useful xtals and a mixer/occilator of some sort, but now that its open i realized that i dont know how to read the numbering on the xtals and as far as chips go the only one i recognized was the 7805.

the xtals are 11.150 htl 14p, 5.1612 htl 20p, and 4,129 htl 30p
could anyone tell me how to read this in terms of hz.
also if anyone could identify these ic's i would be very grateful.

SFH615A-3 (4pins)
DBL5015V (20pins)
7324RP (14pins)

I also have one more ic laying around here that i dont know what it is, its from one of those little fm transmitters that you use to send stuff from your discman to your fmradio only car sterio. it is an: 2035 JRC A6004 A

Thanks in advance for any response,
J. Chihonik

57. Re: Removing scratches form plastic meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 15:51:41 UTC
From: cj <cj_johansson@hp.com>
Message-ID: <3C347E0D.E243BC5E@hp.com>
Source record: 47599

Well, just one more I didn't see mentioned, cheap and almost everyone
already has a supply:

Toothpaste.

Works really well on plastic, some brands are more abrasive, but most
are more than fine enough...

-cj
KD6AEG

Dan Richardson wrote:
>
> Thanks one and all. Got more than enough information.
>
> Again thanks and Happy New Year.
>
> 73
> Dann6, K6MHE
>
> On Sun, 30 Dec 2001 13:14:37 -0800, Dan Richardson <Xk6mhe@arrl.net>
> wrote:
>
> >Hi,
> >
> >Would like to get some suggestions for removing fine scratches from
> >plastic meter faces (covers).
> >
> >Thanks,
> >
> >Danny, K6MHE
> >

58. Re: different frequencies through a wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 17:26:58 UTC
From: John O'Flaherty <wewelcomespam@blackhole.net>
Message-ID: <3C349462.393A4BF7@blackhole.net>
Source record: 47600

Kurt Stocklmeir wrote:
>
> I am trying to understand how electrons flow through a wire. Many
> frequencies can travel through a wire and not interfere a lot with each
> other. Different frequencies will change direction at different times.
> Different frequencies can be going in different directions. I think a lot
> of current could be going in 1 direction and it tends not to cause trouble
> for electrons changing directions.

The same way that many frequencies at once can propagate through air,
as the movements of molecules of air. The wave motion or propagation is
a different thing from the movement of the molecules or electrons.
Similarly with waves on water- the wave propagation is different from
the movement of molecules, even though propagation depends on it. The
wave may travel many feet, but the movement of the molecules of water
may be only inches.
Now, at any instant, the velocity and pressure of the air, or the net
movement of electrons, at any one point, have only one distinct value,
but frequencies and waves are _patterns_ of movement, not the movements
themselves.
I remember reading an example that clarifies the difference between the
movement of an impulse and the movement of the medium in which it
travels. Imagine a long train, stopped. Then it starts, at a very low
speed initially. There is a clicking sound as the couplers pull up
tight, and this impulse travels down the train at a high speed,
depending on how much slack there is at each coupler. But the train
itself is only moving at a fraction of a mile per hour.

--
john

59. Re: at what point will a germanium detector 'detect'?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 18:44:03 UTC
From: Rick Karlquist <richard@karlquist.removethis.com>
Message-ID: <TD1Z7.636$MK.12983@rwcrnsc54>
Source record: 47601

At low levels, all diodes operate in the "square law" regime, meaning
that if you demodulate with them, the output will be the square of
the correct voltage. To get the diode to operate linearly requires on the
order of a milliwatt typically. The exact level depends on the particular
diode characteristics and how linear is "linear". 5% THD is not all that
linear, so it wouldn't surprise me if a milliwatt was enough.

To get "high fidelity" AM demodulation, you should have several
volts of RF across the diode OTOH, if you are happy to be in
the square law regime, some state of the art "zero bias schottky"
diodes work down to -70 dBm.

Rick Karlquist
N6RK

"gudmundur" <hexter@blazenet.net> wrote in message
news:u37rg7dj75jn55@corp.supernews.com...
> I must phrase my question properly so as not to sound dumb. I would
> like to detect amplitude modulation using a germanium diode and an audio
> amplifier chain that can produce 80 db of audio gain to drive a set
> of headphones. I would like to connect the detector to the output of a
> narrow bandwidth preamplifier in the 15.5 mhz region (bandwidth 10khz
> at 10 db down). The preamp has a 100 ohm resistor to ground to set it's
> output impedance. I guess the best way to ask would be this, At what
> minimum dbm or even dbv (i can handle the math) referanced at 50 ohms
> can I expect to recover decent distortion free audio? Distortion free
> taken as meaning less than 5% THD on normal vocal audio frequencies.
>
> This puzzels me, as I don't know how much drive it would take to get
> conduction, and additionally, how far into conduction I would have to
> go to get decent recovery of amplitude modulation.
>
> BTW, the preamp is homebrew using 6AJ5 valves, and is producing
> about 40 Db gain looking from 50 ohm input to the 50 ohm output
> connector. (Both BNC)
>

60. Re: MAX 202

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 22:13:40 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u39m2k6lgj95e@corp.supernews.com>
Source record: 47602

If the part that sounds too good to be true is getting +/- 15 from a single 5 volt supply, that's the magic of a charge pump. You can do it yourself with discrete parts, but it's a pile simpler with one of the Maxxim parts. Like other writers, I have used the MAX232, and it required some large caps. One of the parts, I think it's still a 232 but with a different suffix, doesn't even require external caps.

With a bit of hunting around you can get them pretty cheap - well worth keeping a few in the junk box just in case. Heck, I had one situation where I needed a little negative voltage for an extended temp LCD, and the 232 was easier than futzing around making a charge pump.

..

"Jerry W. O'Dell" <jwodell@provide.net> wrote in message
news:3c339e7f.2163015@news.provide.net...
> Anyone ever use a Maxim 202 to go from TTL to RS232?
> Sounds a little too good to be true!!!
>
> Thanks
>
> 73 jerry w8gnd
>

61. different frequencies through a wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 22:24:41 UTC
From: Kurt Stocklmeir <kurtstocklmeir@worldnet.att.net>
Message-ID: <01c1949e$ce9501e0$712b4f0c@oemcomputer>
Source record: 47603

Thank you for answers.

It is true many frequencies of sound can go through the air. I guess it can be compared to electrons going through a wire.

I was thinking it could be associated with different energy levels making up a metal. I think a conduction band has different energy levels. May be different frequencies find different energy levels for a path.

Current going in only 1 direction tends to spread out through the whole wire. High frequencies tend to stay on the outside of a wire. May be current going in only 1 direction is made to stay at the center of a wire and different frequencies spread out through a wire with the highest frequencies outside. I am not saying any of this is right.

There is not any good reason not to break up words.

62. Re: Followup NEC C1600 transistor info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-03 22:43:50 UTC
From: rexa*non*spam*@dnai.com
Message-ID: <ecn93uclk6m4oan6k3cep8ih08dnvl1b3b@4ax.com>
Source record: 47604

On Thu, 03 Jan 2002 01:09:42 -0400, Your Friend Bill wrote:

>> Well, NEC made a 2SC1600. I did a quick search on Google - there were
>> quite a few listings and I didn't dig very deep. Punch in 2SC1600 and
>> see if you can find something via that route. On many Japanese
>> transistors the markings are this way (add the 2S) but thats no
>> guarantee.
>> GL,
>> Bill
>
>Here's what I found on the 2SC1600:
>TO-46/EBC case. TO-46 is about 0.2" in diameter, flatter profile than a
>TO-5
>Vcbo 40
>Vceo 20
>Vebo -
>ICa 0.25
>Pcw 4.375

Ok. I'm convinced. This must be what they are. The case seems to
match what I see in the board. I was thrown off by the power
rating, but there's no reason they can't be used in a lower power
application.

Thanks for all the help finding this information.

-Rex, KK6MK

63. ferrite rod wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 01:11:49 UTC
From: erik tesnau <sumpcaver@worldnet.att.net>
Message-ID: <pj7Z7.323529$W8.12366168@bgtnsc04-news.ops.worldnet.att.net>
Source record: 47605

Hello all,

I'm looking for a ferrite rod made from Stackpole 24B mix or equivalent.
The u is around 2000. The rod is 0.75" in dia and 12" long.

This rod is to be incorporated in a LF beacon for location work.

I have searched high and low all over the Web and have turned up empty
handed so far.

Maybe someone here can help...

Thanks,
Erik
sumpcaver@att.net

64. Re: MAX 202

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 01:27:25 UTC
From: Bob <ralarocc@suffolk.lib.ny.us>
Message-ID: <3C3504FD.48350865@suffolk.lib.ny.us>
Source record: 47606

xpyttl wrote:

> If the part that sounds too good to be true is getting +/- 15 from a single
> 5 volt supply, that's the magic of a charge pump. You can do it yourself
> with discrete parts, but it's a pile simpler with one of the Maxxim parts.
> Like other writers, I have used the MAX232, and it required some large caps.
> One of the parts, I think it's still a 232 but with a different suffix,
> doesn't even require external caps.
>
> With a bit of hunting around you can get them pretty cheap - well worth
> keeping a few in the junk box just in case. Heck, I had one situation where
> I needed a little negative voltage for an extended temp LCD, and the 232 was
> easier than futzing around making a charge pump.
>
> ..
>
> "Jerry W. O'Dell" <jwodell@provide.net> wrote in message
> news:3c339e7f.2163015@news.provide.net...
> > Anyone ever use a Maxim 202 to go from TTL to RS232?
> > Sounds a little too good to be true!!!
> >
> > Thanks
> >
> > 73 jerry w8gnd
> >

go to Maxim's web site they will send you two free samples of most products plus
application sheets can be down loaded. They will also send a full line catalog
on CD for free.

Great folks to deal with.
--
Bob La Rocca
Lindenhurst, New York

65. Re: ferrite rod wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 01:30:49 UTC
From: redmondj <redmondj@concentric.net>
Message-ID: <3C350693.B1CE9044@concentric.net>
Source record: 47607

Erik,

Try "Fair rite" corp. The still have rods.

73, Alan K6RFK

erik tesnau wrote:

> Hello all,
>
> I'm looking for a ferrite rod made from Stackpole 24B mix or equivalent.
> The u is around 2000. The rod is 0.75" in dia and 12" long.
>
> This rod is to be incorporated in a LF beacon for location work.
>
> I have searched high and low all over the Web and have turned up empty
> handed so far.
>
> Maybe someone here can help...
>
> Thanks,
> Erik
> sumpcaver@att.net

66. Re: useing an old phone for parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 01:54:17 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <dX7Z7.514532$8q.42497809@bin2.nnrp.aus1.giganews.com>
Source record: 47608

"Johnathon and Courtney Chihonik" <chihonjcnospam@mb.sympatico.ca> wrote in
message news:3C347DFB.9B46486F@mb.sympatico.ca...
> Hey there all, recently my (extremly cheap) Curtiss cordless phone bit
> the bullet and being the curious little monkey i am, of course, i tore
> it open almost immediatly.
> Unfortunatly, my electronics experience ended at the end of grade XII
> (and that was 4years ago). so now that its apart i have no clue what im
> looking at. Anyways, i figured that a fm cordless phone would provide me
> with a bunch of basic radio parts being that it is a transmitter and a
> reciever for 900mhz. I assumed that there would be some useful xtals and
> a mixer/occilator of some sort, but now that its open i realized that i
> dont know how to read the numbering on the xtals and as far as chips go
> the only one i recognized was the 7805.
>
> the xtals are 11.150 htl 14p, 5.1612 htl 20p, and 4,129 htl 30p
> could anyone tell me how to read this in terms of hz.
> also if anyone could identify these ic's i would be very grateful.

The crystal frequencies are as marked. 11.150 MHz, 5.1612 MHz and 4.129
MHz. If they are larger than a crystal ought to be, they may actually be
oscillators.
>
> SFH615A-3 (4pins)
> DBL5015V (20pins)
> 7324RP (14pins)
>
> I also have one more ic laying around here that i dont know what it is,
> its from one of those little fm transmitters that you use to send stuff
> from your discman to your fmradio only car sterio. it is an: 2035 JRC
> A6004 A

The 2035 is probably a date code, 35th week of 2000.
>
> Thanks in advance for any response,
> J. Chihonik
>
In general, these ICs are specialized and not standard numbers. In some
cases they are standard numbers but ordered to company specs and thus are
marked with a company number. It's anyone's guess what they are.

The most useful parts in the telephone probably are the microphone, ringer,
speaker, and battery holder. Maybe an LED.

Bob

67. Re: useing an old phone for parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 03:47:45 UTC
From: Johnathon and Courtney Chihonik <chihonjcnospam@mb.sympatico.ca>
Message-ID: <3C3525E1.A8DB0E45@mb.sympatico.ca>
Source record: 47609

Thanks Bob, i was hoping to find a mixer/multiplier or something else really cool, but thanks for all your help.

greatly appreciative,
Johnathon C.

68. Re: Help with data for fujitsu PLL chip MB87080A, made in 1994 please

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 03:58:29 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C35288E.6213@pop.removethistomailme.net>
Source record: 47610
Cross-posted to: rec.radio.amateur.homebrew,aus.electronics

Richard wrote:
>
> HI all,
>
> I have a quantity of Fujitsu PLL chips made in 1994, the MB87080A.
> Unfortunately the Fujitsu site doesn't have data for chips back then.
> Does anybody have an old printed data book or other source of data
> with the information please?
>
> Thanks in advance
> Richard

http://www.freetradezone.com/dc_images/63/65/D0026365.pdf

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

69. Anybody converted old cell phones into amateur radio equipment?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 04:03:48 UTC
From: whagen6@cs.com
Message-ID: <20020103230348.18483.00003215@mb-fw.news.cs.com>
Source record: 47612

Anybody converted old cell phones into amateur radio equipment?

70. January Junkbox Parts Surplus

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 04:04:20 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <GL9Z7.716$Pe5.152699@news1.iquest.net>
Source record: 47611
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap,rec.radio.amateur.misc

This month my junk box is getting a bit thin. This is what I have as
available surplus.

Parts for Sale as of 01/01/2002
==========

Caps
====
NEW .1 uF Poly/Film caps - 10% 250v, new stock, paper tape, nice
long leads. These are not NPO and are made by S&M Components
50/$3.00 or 100/$5.00

NOS .01 uF ceramic caps, 10% 100v brand new by Kyocera
50/$3 or 100/$5

NOS 1000pf blue mono caps, 10% 100
50/$3 or 100/$5

NOS 470pf ceramics on paper tape, rated 5%
50/$3 or 100/$5

NOS 12pf NPO ceramics on tape
50/$4 or 100/$7

22uF 35v electrolytics These caps are on paper tape, NOS (New, but old
stock) made by Richey.
100/$2

Connectors
==========
I have NEW BNC chassis connectors for (includes nut and lock
washer)
==========
25 for $14.00
50 for $24.00
100 for $40.00

Voltage Regulators
==========
LM7805C voltage regulators. TO220 case. 5 for $4.00
L7806CV voltage regulators. TO220 case. 5 for $4.00
LM7808CT voltage regulators. TO220 case. 5 for $4.00
LM7812T voltage regulators. TO220 case. 5 for $4.00

3 of each for $10 (12 total VR's)

Key/Headphone Jacks
==========
These are 3.5mm female stereo PCB mount jacks. Can be used in
ugly/manhattan building projects with no problems.
3/$1.35 (or send a buck and a stamp)

Transistors
==========
2N2222A'S in plastic TO92, NPN - 50/$4.50 NEW PARTS
2N3906's plastic TO92. PNP - 50/$4.00 NEW PARTS
2N3704's plastic TO92, NPN - 50/$4.00 NEW PARTS

I AM OUT OF METAL 2N2222'S!!! BUMMER!!

IRF540's TMOS Power FET, N-Channel, 27A, 100v RDS(on) = .070 Ohms
http://www.onsemi.com/pub/Collateral/IRF540-D.PDF for data sheet
$1.00 each.

BC847B - Surface Mount NPN's, general purpose
CBO = 50v, CEO = 45v, EBO = 6v, Collector Current Max = 100 mA,
electrical characteristic curves for this unit are the same as the
PN2222A, SST222A, MMST2222A, and UMT222A transistor. These are new
stock, on SM tape.
100pcs/$2.50

2N7200 MOSFET - 5/$2 10/$3.50

Crystals
========
3.579545 Mhz Crystals for 80m - These are pulled colorburst crystals,
2/$1

POTS - USED
==========
10K 1 Turn Panel mount pots. These are pulls. No knobs, just
shafts. Most are Allen Bradley. Pot is about as big as a quarter.
With nut. 5/$4.00

Diodes
======
1N4148 - You always need these. 75 for $2.00 These are NEW.

Let me know if you're interested. All prices are post paid to the
USA, unless otherwise noted. I will ship to non USA addresses but we
need to discuss the shipping charges first.

--

=======================================
KB9BVN/QRP - New Whiteland IN - EM69WN
QRP-ARCI #10223 QRP-L #1540 FIST #5695
FISTS CC #764 - Proud Member ARRL
TEN TEC SCOUT @ 5W or NORCAL 40A @ 1.3W
INTO INFAMOUS AF4PS ATTIC DIPOLE
SOC #400 AND FLYING PIGS QRP #-57

==========

71. Re: useing an old phone for parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 04:51:44 UTC
From: Michael Black <blackm00@cam.org>
Message-ID: <Pine.LNX.4.20.0201032333350.14305-100000@darkstar.example.net>
Source record: 47613

On Thu, 3 Jan 2002, Johnathon and Courtney Chihonik wrote:

>
> Thanks Bob, i was hoping to find a mixer/multiplier or something else really
> cool, but thanks for all your help.
>
> greatly appreciative,
> Johnathon C.
>
>
Of course, you will find some cool parts, and more valuable than "LEDs and
speakers".

That 11.150MHz crystal for example. Since that frequency mixed with
10.7Mhz results in 450KHz, it's pretty certain it's there to convert
the 10.7MHz IF to 450KHz. That can be a useful frequency, and from
time to time people do ask where they can get them (and I suggest
a cordless phone). And if those are the IF's, then there's bound
to be a ceramic filter at 10.7MHz (though probably nothing too narrow;
consumer electronics tend to use FM broadcast-band type filters
there, for economy reasons, merely to make sure that 10.7MHz is
the only signal passed onto the next IF stage. And there will
be a 450KHz ceramic filter, of a bandwidth suitable for narrow
band FM. Maybe not useful for many, but if you want to build
an FM receiver or adaptor, it's a great source for these
components.

In fact, one could just extract the whole FM IF strip from the
unit, and transplant it somewhere else. I don't know about
900MHz cordless phones, but the 49Mhz units that I've bought
for parts at garage sales ahve used identifiable ICs for the IF
strip (and, in fact one IC that takes 10.7MHz at one end and
puts out audio at the other end). Even if they aren't recognizable
numbers, sometimes it's worth tracing out a bit of the circuitry
around such ICs (the filters should be recognizable, and they'd
be in the vicinity of the IF IC), and then check data books to
see if there's a match on pinouts. Motorola made ICs for these
applications, and I've found them in various consumer items; later
generations of equipment may have gone to more obscure devices,
but maybe not.

I've never seen the insides of a 900Mhz cordless phone, so I
can't say what else you'd find in there. Cellphones will have
similar FM IF strips, and VCO modules, and usually definable mixers
(and prescalers that work up into the UHF range); at least, if

you go for the ones that are old, bulky and cheap. I found a satellite receiver a few weeks ago, and it had a nice diode ring mixer.

But looking at the ICs that Maxim produces, I can see how the UHF stuff might be done in fairly integrated ICs that might not be recognizable, and might not be useable except for the intended application, due to the high level of integration.

Do a websearch on the ICs (make sure you've got the IC number, and not the date code). I've taken things apart, found ICs that look like they might be useful, and found some information by going to yahoo or google. I've found information about prescalers that way; I could figure the pinout from the circuit board, but I needed to know the division ratio and sometimes such information has popped up not at manufacturer's sites, but at distributors websites. Or once you have a ballpark bit of info, ie this ones for the IF strip, then you can judge whether it's worth doing some more searching. It's often best to keep the circuit boards intact, until you can use the parts, because you can gather information from tracing the circuits.

Michael VE2BVW

72. Re: ferrite rod wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 06:14:39 UTC
From: tdonaly@cs.com
Message-ID: <20020104011439.06885.00002748@mb-bg.news.cs.com>
Source record: 47614

Erik wrote;
>Hello all,
>
>I'm looking for a ferrite rod made from Stackpole 24B mix or equivalent.
>The u is around 2000. The rod is 0.75" in dia and 12" long.
>
>This rod is to be incorporated in a LF beacon for location work.
>
>I have searched high and low all over the Web and have turned up empty
>handed so far.
>
>Maybe someone here can help...
>
>Thanks,
>Erik
>sumpcaver@att.net
>
>
You aren't , by chance, looking to build Brian Pease' 3,496 Hz beacon are you? If you are, search for "Stackpole 24B" on Google. He gives a couple of email addresses for himself. Why not email him and ask him where he got his 2000u .625"x12" "Stackpole 24B" ferrite core. By the way, how much power do you intend to put into this thing if you ever find it?

Good luck,
Tom Donaly KA6RUH

73. k2 and rdx109

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 07:59:37 UTC
From: spearce@zfree.co.nz
Message-ID: <3c3560d3$1@zfree.co.nz>
Source record: 47615

Has anyone experience of the Hands Electronics RDX109
ssb/cw transceiver and how it compares in terms of metrics with the elecraft
k2
Thanks
Stephen
zl1any
g_and_s_pearce@xtra.co.nz

http://www.zfree.co.nz

74. DDDS synthesizer parts sought..I have 4 Nova Tech CCT Boards..trade??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 10:02:58 UTC
From: ve3ab@mondenet.ca
Message-ID: <3c357ce7.2033737@news.mondenet.com>
Source record: 47616

anyone built../plan on building a DDDS..I have 4 commercial boards
(obtained from someone on this newsgroup about a year ago)..
Some of the parts may be discontinued..but id be interested in
corresponding with someone who has parts/boards///wants boards ect..
the NOVA Tech boards i have are FB and the design looks good.
Maybe someone would like to sell/trade ect..I would like to build up
one of these DDDS units this winter as a project...73 Earl VE3AB

75. Attention all constructors!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 10:55:59 UTC
From: pentode <pentode@ntlworld.com>
Message-ID: <JTfZ7.46199$ll6.6799773@news6-win.server.ntlworld.com>
Source record: 47617

I invite you to view my new website at:
www.copperisland.biz

Duncan G4DFV

76. Re: 2m Horizontal Loop Antenna Plans

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 11:02:27 UTC
From: Kim & Steve Merrill <buck0@mediaone.net>
Message-ID: <3C358D24.B49E9A5D@mediaone.net>
Source record: 47618
Cross-posted to: rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I have done some work in designing simple antennas for emergency communications on 2-Meters.

This is a link to my Ham page: http://people.ne.mediaone.net/buck0/hampage.htm
It contains designs for 4 different 2-meter collinear antennas, a 2-meter SSB Halo, and some information on Go-Kits.
The ARRL Website also has a link to this page located:
http://www.arrl.org/tis/info/Yagi-V.html

This HALO design is not ground dependent and can be mounted atop a section of PVC. See comments! Easy to build. Cheep$$$

Some of my antenna designs are posted on the Erie County Chapters of ARES and RACES Website:
http://hamgate1.sunyerie.edu/races/antenna.htm
The ARRL Website also has a link to this page located in their Technical Information Pages: http://www.arrl.org/tis/info/JPole-V.html

Have fun building!
73s
Steve KB1DIG ;-)

Jason Dugas wrote:

> Hi,
>
> I've heard that these small 2m horizontal loop antennas (sometimes stacked 2
> or 4 at a time) (also known as sqkloops?) are excellent for sideband. I see
> them offered for relatively cheap by KB6KQ(.com). However, my Dad and I are
> interested in building one for fun. Does anyone know if the plans for this
> type of antenna can be found in QST or in the Antenna book?
>
> We are interested in using one or two of them for 2m SSB (we're just getting
> started).
>
> Thanks for any help you can provide,
>
> Jason
> KB5URQ

77. Re: 2m Horizontal Loop Antenna Plans

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 11:08:21 UTC
From: Kim & Steve Merrill <buck0@mediaone.net>
Message-ID: <3C358E85.C14E6B2C@mediaone.net>
Source record: 47619
Cross-posted to: rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I have done some work in designing simple antennas for emergency
communications
on 2-Meters.

This is a link to my Ham page:
http://people.ne.mediaone.net/buck0/hampage.htm
It contains designs for 4 different 2-meter collinear antennas, a
2-meter SSB
Halo, and some information on Go-Kits.
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Have fun building!
73s
Steve KB1DIG ;-)

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> type of antenna can be found in QST or in the Antenna book?
>
> We are interested in using one or two of them for 2m SSB (we're just getting
> started).
>
> Thanks for any help you can provide,
>
> Jason
> KB5URQ

78. Re: DDDS synthesizer parts sought..I have 4 Nova Tech CCT Boards..trade??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 12:49:01 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c35a445$0$31345@echo-01.iinet.net.au>
Source record: 47620

Have a look at

http://www.iinet.net.au/~richardh/VK6BRO.htm.

Richard

"Earl Andrews" <ve3ab@mondenet.ca> wrote in message
news:3c357ce7.2033737@news.mondenet.com...
> anyone built../plan on building a DDDS..I have 4 commercial boards
> (obtained from someone on this newsgroup about a year ago)..
> Some of the parts may be discontinued..but id be interested in
> corresponding with someone who has parts/boards///wants boards ect..
> the NOVA Tech boards i have are FB and the design looks good.
> Maybe someone would like to sell/trade ect..I would like to build up
> one of these DDDS units this winter as a project...73 Earl VE3AB

79. Re: Anybody converted old cell phones into amateur radio equipment?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 12:52:41 UTC
From: n9llo@aol.com
Message-ID: <20020104075241.06576.00000500@mb-fk.aol.com>
Source record: 47621

I did about seven years ago. It was an old audiovox trunk mount unit. I used the RF board out of it. It made good power at 902-928 Mhz. It had dual synthesizers one for TX and one for RX. I used a Motorola MC68705 processor to do the data loading into the loop dividers. I already had a development system for the ' 705 series parts. I went with low side injection for the RX. I may have had to change a chip cap or two in the VCO's but I cant remember. The original ceramic duplexar was disgarded. This left the front end wide open so I used a 3 section apeture copuled filter I got at a hamfest for RX and TX flitering and a coaxial relay for switching. A box with led
freq display and up-down freq switches and
a repeater offset switch and Mic preamp and connector made up the control head. It made about 5 watts with the power control all the way up. RX was about .3 sinad. I still got it but my 900 repeater is history as no other brave souls would attempt to get on.

Chris N9LLO

80. Re: Attention all constructors!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 14:34:43 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3C35BD83.52AF50AE@ay.com.au>
Source record: 47622

pentode wrote:
>
> I invite you to view my new website at:
> www.copperisland.biz

Very neat for the lazy constructor :-)

I'll stick to my cheap asian knock-off nibbler + chunk of PCB for now.
If I ever get sick of cutting up bits I might buy it though. Are they
snap-off? I must admit that I find sitting and listening to the radio
while punching them quite theraputic, but a bit painful on the hands
after 50 or so.

--
Alan Yates
http://www.vk2zay.net/
The Moon is Waning Gibbous (68% of Full)

81. Re: useing an old phone for parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 15:17:49 UTC
From: Johnathon and Courtney Chihonik <chihonjcnospam@mb.sympatico.ca>
Message-ID: <3C35C79D.BF907F1F@mb.sympatico.ca>
Source record: 47623

Cool Thanks for the info, I'm thinking about bulding a converter to use an old am car radio to pick up apt weather satellite picts. The only problem is im a complete newb to the RF scene and im finding theres so much stuff i need to know that i didnt learn in my electronics classes.

Thanks again for the info,
Johnathon Chihonik

82. Re: MAX 202

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 19:23:46 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0201041123.2802814@posting.google.com>
Source record: 47624

John Hague <John.Hague@philips.com> wrote in message
news:<3C344829.42475553@philips.com>...
> "Jerry W. O'Dell" wrote:
>
> > Anyone ever use a Maxim 202 to go from TTL to RS232?
> > Sounds a little too good to be true!!!
> >
> > Thanks
> >
> > 73 jerry w8gnd
>
> Jerry
>
> I used the MAX232 a few years ago to convert between TTL and RS232
> levels
> and it worked a treat.
>
> Regards
>
> John, G4GOY

Thats the most common one used lately I think. The MAX232 is used for
many of the ci-v converters for icoms, etc, etc. I think it's possible
they even sell that chip at rat shack. I've heard they did anyway.. MK

83. Re: Removing scratches form plastic meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 19:36:36 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0201041136.4fe850a@posting.google.com>
Source record: 47625

Dan Richardson <Xk6mhe@arrl.net> wrote in message
news:<po0v2u0h46j6lqi6gml1oae1re6a4tg850@4ax.com>...
> Hi,
>
> Would like to get some suggestions for removing fine scratches from
> plastic meter faces (covers).
>
> Thanks,
>
> Danny, K6MHE

My method is to use toothpaste and the end of my index finger. I've done this many times, and it works great. Is a bit time consuming though if the scratch is deep. I just put a small dab of toothpaste on the end of my finger, and then add a tiny bit of spit or water and start rubbing it in. I usually go in circles. This will work, and when you get though, the crystal will look shiny and just like brand new. I last did this a few months ago when an ignorant dweeb sprayed OFF on my TS-830 at FD. It stained the clear glass in front of the display. I used the toothpaste method and after about 20-30 min, the plastic looked like brand new. You can't tell it was ever touched. And if you look at it with the light shining, it's shiny on the surface just like new.
I even did this on the speedometer crystal on my old 68 ford truck. I took a bad scratch about 90% out. I could have took it all out, but I got tired of rubbing. Anyway, this method may sound a little rinky dink, but it works great. Will make that plastic look BRAND NEW if you do it long enough. Also I've never had a problem with extra scratching of the plastic with toothpaste. It's just right as far as grit. I wouldn't waste any money on special stuff. The toothpaste will work just as well. Just takes a bit of time rubbing. MK

84. Re: Attention all constructors!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 19:55:02 UTC
From: Null <Null@Null.com>
Message-ID: <a151al$f5h$1@helle.btinternet.com>
Source record: 47626

I think that this was called the ugly construction at one point.
So I think that I will be keeping my £15 thanks all the same.

"pentode" <pentode@ntlworld.com> wrote in message
news:JTfZ7.46199$ll6.6799773@news6-win.server.ntlworld.com...
> I invite you to view my new website at:
> www.copperisland.biz
>
> Duncan G4DFV
>
>

85. Re: Attention all constructors!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 21:16:03 UTC
From: pentode <pentode@ntlworld.com>
Message-ID: <RXoZ7.803$vf6.233809@news6-win.server.ntlworld.com>
Source record: 47627

The 'Copper Island' system is intended to be far neater than 'ugly'
construction,
where IC's are usually positioned 'dead-bug' fashion, I seem to recall.
My excellent sales figures would disagree with anyone who may think this
technique is not
popular amongst constructors, simply because all the hard work of preparing
the pads
has been done, making it very attractive to enthusiasts who like to 'roll
their own', but who
would prefer to get building instead of sitting around sawing and chopping
up rough bits of board beforehand.
The pads in my outfits are all machine cut and finished.
For those constructors who like to produce traditional printed circuit
boards,
my system is ideal for the prototyping or 'breadboarding' stage of design,
in fact I have received enquiries from schools and other educational
establishments who want to use my system in their electronics classes.

Duncan G4DFV

Null <Null@Null.com> wrote in message
news:a151al$f5h$1@helle.btinternet.com...
> I think that this was called the ugly construction at one point.
> So I think that I will be keeping my £15 thanks all the same.
>

86. Re: Attention all constructors!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 22:21:30 UTC
From: faunt+u@panix.com
Message-ID: <mfr4rm14v11.fsf@panix1.panix.com>
Source record: 47628

This has been called Manhattan style construction over here,
check out http://www.qsl.net/k7qo/manhat.htm.

This kit could be of use to people who are workshop limited, but still
want to build their own circuits. There have certainly been times in
my past when something like this would have been highly desirable.

I applaud this effort, and have posted a pointer to it on the QRP-L.

How much for a kit shipped to the US?

73, doug

"pentode" <pentode@ntlworld.com> writes:

> The 'Copper Island' system is intended to be far neater than 'ugly'
> construction,
> where IC's are usually positioned 'dead-bug' fashion, I seem to recall.
> My excellent sales figures would disagree with anyone who may think this
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> establishments who want to use my system in their electronics classes.
>
> Duncan G4DFV
>
>
> Null <Null@Null.com> wrote in message
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> > I think that this was called the ugly construction at one point.
> > So I think that I will be keeping my ï¿½15 thanks all the same.
> >

87. Re: Attention all constructors!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 22:34:40 UTC
From: "Carl R. Stevenson" <wa6vse-shack@fast.net>
Message-ID: <3c362dd1_2@news7.fast.net>
Source record: 47630

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

There are similar kits of "prototyping boards" available, as
well as a LARGE variety of all sorts of other electronic parts,
from DigiKey http://www.digikey.com ... same day shipping,
credit card orders, don't think they have a minimum if I recall
correctly.

DISCLAIMER: Neither I, nor NCI, have any connection to
DigiKey, other than I'm a satisfied customer

73,
- --
Carl R. Stevenson - wa6vse
<mailto:wa6vse@fast/net>
<http://www.users.fast.net/~wa6vse>
- ------------------------------------------------------
NCI-1052
Executive Director, No Code International
Fellow, The Radio Club of America
Senior Member, IEEE
Member, TAPR
Member, ARRL
- ------------------------------------------------------
Join No Code International! Hams for the 21st Century.
Help assure the survival and prosperity of ham radio.
<http://www.nocode.org>
```

"Doug Faunt N6TQS +1-510-655-8604" <faunt+u@panix.com> wrote in
message news:mfr4rm14v11.fsf@panix1.panix.com...
> This has been called Manhattan style construction over here,
> check out http://www.qsl.net/k7qo/manhat.htm.
>
> This kit could be of use to people who are workshop limited, but
still
> want to build their own circuits. There have certainly been times
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> my past when something like this would have been highly desirable.
>
> I applaud this effort, and have posted a pointer to it on the QRP-L.
>
> How much for a kit shipped to the US?
>
> 73, doug

>
>
>
> "pentode" <pentode@ntlworld.com> writes:
>
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> > construction,
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> > popular amongst constructors, simply because all the hard work of
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> > has been done, making it very attractive to enthusiasts who like
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> > would prefer to get building instead of sitting around sawing and
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> > The pads in my outfits are all machine cut and finished.
> > For those constructors who like to produce traditional printed
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> > my system is ideal for the prototyping or 'breadboarding' stage of
design,
> > in fact I have received enquiries from schools and other
educational
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classes.
> >
> > Duncan G4DFV
> >
> >
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> > >
-----BEGIN PGP SIGNATURE-----
Version: PGP for Personal Privacy 5.5.3

iQA/AwUBPDYt95e+N6+q84HiEQJNSwCgyr5U9dqvP8DG9XFGQ82EMphAuTkAoOb0
2MzduRN1Sccla7MOiu+Mz12N
=JRew
-----END PGP SIGNATURE-----

88. Re: different frequencies through a wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-04 22:35:57 UTC
From: John O'Flaherty <wewelcomespam@blackhole.net>
Message-ID: <3C362E4D.CE429529@blackhole.net>
Source record: 47629

Kurt Stocklmeir wrote:
>
> Thank you for answers.
>
> It is true many frequencies of sound can go through the air. I guess it
> can be compared to electrons going through a wire.

In fact, electrons in the conduction band of a metal are considered to be like a gas, with the electrons moving so freely that they are interchangeable. And in free space, many colors of light coexist, even if there is no gas there.

> I was thinking it could be associated with different energy levels making
> up a metal. I think a conduction band has different energy levels. May be
> different frequencies find different energy levels for a path.

No, that's not right, any more than that different frequencies in air find different gas molecules to go through. All frequencies going through a wire at any instant add up linearly to a single instantaneous voltage and current.

> Current going in only 1 direction tends to spread out through the whole
> wire. High frequencies tend to stay on the outside of a wire. May be
> current going in only 1 direction is made to stay at the center of a wire
> and different frequencies spread out through a wire with the highest
> frequencies outside. I am not saying any of this is right.

The reason high frequencies stay at the outside of a wire is that the rapidly changing electric fields can't exist deep within the wire- they need to be close to the free space at the outside of the wire. But unidirectional current, once established, is uniform throughout the wire. As far as I understand it, none of this has to do with different energy levels of electrons, except that those that make a metal a conductor are all in the conduction band.

You should probably forget about various media to study waves and frequencies. It's all similar, whether in air, water, an electron gas, or free space. Waves and frequencies are patterns of change, not movements themselves.

> There is not any good reason not to break up words.

--
john

89. Re: at what point will a germanium detector 'detect'?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-05 00:48:04 UTC
From: tech.stevea@talk21.com
Message-ID: <c5e0f038.0201041648.298dbbf3@posting.google.com>
Source record: 47631

Some problems with a diode envelope detector, giving rise to unwanted harmonic distortion are:

1. Threshold voltage - a voltage typically 0.2V for germanium is needed to get the diode to conduct.

2. Diagonal clipping. The RC filter after the detector used to average out the IF frequency components does not always follow the negative signal transitions.

3. Sideband symmetry. The diode envelope detector is (for some reason) intolerant of phase imbalance between the carrier and sidebands.

I was able to get hold of a paper on the internet which models (theory and practice) the distortion generated by a diode detector. The THD generated at modulation levels of 50% are 0.4% and for 100% modulation are of the order 2%.

Some time back I designed and built a synchronous AM detector - this works by using a PLL to generate a local carrier (phase-locked to the incoming carrier) and multiplying that with the incoming IF signal. Although complex to build, one can switch between the usual envelope detection mode and the sync mode and compare the sound quality. The sync mode is much more pleasing to listen to. I don't know what the THD performance of a synch detector is, but it overcomes the problems mentioned above with conventional diode detectors. It seems to be much more tolerant of sideband assymetry (eg. that grating distortion you get during receiver mistuning or fades).

Disadvantage of the sync detector is that it contains nearly as much electronics as the average superhet radio. I'm glad I built mine - learnt a lot in the process. There are some designs on the web and in the ARRL handbook which look possible.

Regards-

90. Re: useing an old phone for parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-05 03:41:24 UTC
From: Michael Black <blackm00@cam.org>
Message-ID: <Pine.LNX.4.20.0201042239230.15600-100000@darkstar.example.net>
Source record: 47632

On Fri, 4 Jan 2002, Johnathon and Courtney Chihonik wrote:

>
> Cool Thanks for the info, I'm thinking about bulding a converter to use an old am
> car radio to pick up apt weather satellite picts. The only problem is im a
> complete newb to the RF scene and im finding theres so much stuff i need to know
> that i didnt learn in my electronics classes.
>
> Thanks again for the info,
> Johnathon Chihonik
>
>
One thing worth remembering is that you should get pairs of parts from
this. Whatever is in the remote, should be more or less mirrored in
the base unit. This may not be completely true, since at least
one of the 49MHz cordless phones that I've taken apart used different
parts in the base and the remote, but since you need the same RF
equipment in both, it makes sense that they'd be using the same parts.

Michael

91. Re: different frequencies through a wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-05 04:07:43 UTC
From: Richard Crowley <rcrowley7@xprt.net>
Message-ID: <u3cv0blqah9afb@corp.supernews.com>
Source record: 47633

Different frequencies don't travel separately. Complex sources simply all add and subtract together at any single instant at any single point in space. At any one instant, there is only ONE value, whether it is rendered as voltage, pressure, current, electron flow, sample value on a CD disk, deflection of a microphone diaphragm or speaker, location of the trace on an oscilloscope.

You can actually see this on an oscilloscope display (or on an old black vinyl record if you can find one!).

Stereo is where you take two separate locations in space and sample them simultaneously to produce two information streams.

RC

92. Re: Attention all constructors!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-05 04:16:17 UTC
From: Richard Crowley <rcrowley7@xprt.net>
Message-ID: <u3cvgb15eqhoa7@corp.supernews.com>
Source record: 47634

I love my "drill-mill"s. I have used them for >25 years.

They are like microscopic hole-saws. They drill a thru hole, AND mill out an isolated pad from the blank PCB "ground plane". Next best thing to etching your own PCB.

http://www.intl-eyelets.com/products/drill.html

Their web page isn't exactly up to 21st century standards, but most of the info is there. Mine cost ~$20 back 25 years ago, I'm sure the price has inflated in the meantime.

RC

93. Re: at what point will a germanium detector 'detect'?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-05 06:54:44 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C36A334.43427DA7@clifto.com>
Source record: 47635

Biggles wrote:
> I was able to get hold of a paper on the internet which models (theory
> and practice) the distortion generated by a diode detector.

Where did you find it?

--
Remember, "close" counts in horse-shoes, hand-grenades and nuclear warfare,
but in spamming, it's considered unnecessary precision. -- Alun Jones

94. Re: Source for Tube Extenders?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-05 07:45:53 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3C36AF31.94C4DEA3@ay.com.au>
Source record: 47636

I've made them out of a socket + a tube base of an old dead tube.
Works well with octals, or you can purchase plugs that match the socket.

BarryG wrote:
>
> Appreciate any info on who sells tube extenders - to raise a tube up from
> the socket and provide easy access to clip test leads on to the pins during
> alignment,etc.
>
> Tnx, 73 & H2K2,
> Barry N1EU

--
:wq!

95. Re: Help with data for fujitsu PLL chip MB87080A, made in 1994 please

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-05 09:47:08 UTC
From: vk6tt@optusnet.com.au
Message-ID: <3c37cb4e.1666514@news.optusnet.com.au>
Source record: 47637
Cross-posted to: rec.radio.amateur.homebrew,aus.electronics

John,

thanks for the assistance. No wonder I couldn't make any sense of the
chip, it wasn't a PLL at all.

Kind regards
Richard
VK6TT

On Fri, 04 Jan 2002 03:58:29 GMT, John Miles
<jmiles@pop.removethistomailme.net> wrote:

>Richard wrote:
>>
>> HI all,
>>
>> I have a quantity of Fujitsu PLL chips made in 1994, the MB87080A.
>> Unfortunately the Fujitsu site doesn't have data for chips back then.
>> Does anybody have an old printed data book or other source of data
>> with the information please?
>>
>> Thanks in advance
>> Richard
>
>http://www.freetradezone.com/dc_images/63/65/D0026365.pdf
>
>-- jm
>
>---
>http://www.qsl.net/ke5fx
>Note: My E-mail address has been altered to avoid spam
>---

96. Recommended source for copper laminated printed circuit board sought

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-05 12:24:40 UTC
From: Richard Daventry <newsgps_email@ntlworld.com>
Message-ID: <9fCZ7.40806$Zg2.4922180@news11-gui.server.ntli.net>
Source record: 47638
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

I'm wanting some copper laminated board about 200mm x 300mm size and perhaps even larger. I've never used this before and wonder if any homebrewer out there can recommend a good place to obtain this product in the UK. I know Maplin & RS sell this stuff, just wondering if there are other vendors offering maybe a better deal or whatever. I see different variations of laminated board is made, I'm just after your regular common-all-garden stuff (whatever that designation is, anybody know?). Thanks.

97. Re: Attention all constructors!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-05 13:14:45 UTC
From: Richard Daventry <newsgps_email@ntlworld.com>
Message-ID: <6_CZ7.41071$Zg2.4948026@news11-gui.server.ntli.net>
Source record: 47639

"Richard Crowley" <rcrowley7@xprt.net> wrote in message
news:u3cvgb15eqhoa7@corp.supernews.com...
> I love my "drill-mill"s. I have used them for >25 years.
>
> They are like microscopic hole-saws. They drill a thru hole, AND mill out
an
> isolated pad from the blank PCB "ground plane". Next best thing to
etching
> your own PCB.
>
> http://www.intl-eyelets.com/products/drill.html
>
> Their web page isn't exactly up to 21st century standards, but most of the
> info is there. Mine cost ~$20 back 25 years ago, I'm sure the price has
> inflated in the meantime.

I'm new to copper laminated board consruction. Mmmm, the idea of physically cutting out the copper to leave "islands" or "pads" is pretty neat. Would be nice if one could make rectangular "pads" using some tool. Anybody know of anyone selling tools (apart from the drill-mills") and/or techniques useful in creating round or rectangular pads in these copper laminated boards by cutting out the copper?

G4DFV's system is okay as well.

98. Re: Attention all constructors!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-05 16:06:38 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3C37248D.60F05921@ay.com.au>
Source record: 47640

Richard Daventry wrote:

> I'm new to copper laminated board consruction. Mmmm, the idea of physically
> cutting out the copper to leave "islands" or "pads" is pretty neat. Would
> be nice if one could make rectangular "pads" using some tool. Anybody know
> of anyone selling tools (apart from the drill-mills") and/or techniques
> useful in creating round or rectangular pads in these copper laminated
> boards by cutting out the copper?

Rectangular is kinda hard I'd imagine?

Perhaps you could do it carefully with a grinding bit in a dremel tool
style device? It would be rather time consuming though. Probably
easier to cover the entire board with making tape, and cut out the waste
masking with a scalpel, then etch the board.

For circular, a device like hole-saw without the guide drill would
work. When I read your first post I was thinking about filing a few
teeth into the end of a steel tube and trying that in the drill press.

I use a nibbling tool myself, I punch about 100 little chad things and
put them in a dish, like a jam lid or the bottom of a coke can. Then I
just pick them out as needed and with a single drop of super glue, stick
them to the copper clad ground plane as required.

(OT: anyone else notice that a coke can bottom makes a pretty
reasonable 'dish' for 10 or 24 GHz beacon/test transmitters? You just
run some L or S band RF on some minature hardline up to a good microwave
diode mounted at its focus with a small copper disk to backfire the
radiation towards the Al surface.)

Duncan's pre-cut DIP layouts are damn nice though. WA6OTP has
something similar on his website: http://www.wa6otp.com/new.htm I
gather he has made up a cutting jig and does it with an electric saw?
(I still adore that blokes PTO idea, it really works well).

--
Alan Yates
http://www.vk2zay.net/
The Moon is Waning Gibbous (56% of Full)

99. Re: Recommended source for copper laminated printed circuit board sought

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-05 16:41:13 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.com>
Message-ID: <YzTwVfBpyyN8EAwI@ifwtech.com>
Source record: 47642
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Richard Daventry wrote:
>I'm wanting some copper laminated board about 200mm x 300mm size and perhaps
>even larger. I've never used this before and wonder if any homebrewer out
>there can recommend a good place to obtain this product in the UK. I know
>Maplin & RS sell this stuff, just wondering if there are other vendors
>offering maybe a better deal or whatever. I see different variations of
>laminated board is made, I'm just after your regular common-all-garden
>stuff (whatever that designation is, anybody know?). Thanks.

You're writing to a world-wide newsgroup, but I presume you mean "in the
UK."

The cheapest source is at a rally (US: hamfest), where you can usually
find someone selling scrap ends of board, but we're somewhat out of
season.

Maplin, RS and Farnell are OK for small quantities, but you pay for the
privilege. Mega Electronics are much better for larger sheets, and all
kinds of PCB-making materials. All addresses are on my website in the
'In Practice' section.

However, before trying any of those, look in Yellow Pages for 'Printed
Circuit Services', find someone local and give then a call - they're
bound to have lots of offcuts.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.com/g3sek

100. TI Zener Diode Colour Coding

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-05 17:15:26 UTC
From: Dick <dick@langwang.demon.co.uk>
Message-ID: <3R7oOGAuSzN8EwWh@langwang.demon.co.uk>
Source record: 47641

Can anyone remember how to decode the coloured bands TI used
to mark their small (300mW ?) Zener Diodes years ago. I've got a pile in my
junk box marked Brown-Brown-Brown, Brown-Orange-Brown & Orange-
Orange. I think it was the same as resistor colour coding but that would
make the BBB & BOB 110 & 130v respectively & my DC PSU will only give
me 60v so I can't check w/o making up a jury rigged PSU.

Thanks for reading the e-mail
--
Dick
GM0MNL

101. Re: Recommended source for copper laminated printed circuit board sought

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-05 19:28:25 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <a17k4p$881$1@knossos.btinternet.com>
Source record: 47643
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Richard Daventry" <newsgps_email@ntlworld.com> wrote in message
news:9fCZ7.40806$Zg2.4922180@news11-gui.server.ntli.net...
> I'm wanting some copper laminated board about 200mm x 300mm size and
perhaps
> even larger. I've never used this before and wonder if any homebrewer out
> there can recommend a good place to obtain this product in the UK. I know
> Maplin & RS sell this stuff, just wondering if there are other vendors
> offering maybe a better deal or whatever. I see different variations of
> laminated board is made, I'm just after your regular common-all-garden
> stuff (whatever that designation is, anybody know?). Thanks.

Do you want the resist coated stuff, or uncoated?

The best stuff I've found is the paper composite with thin fibreglass. It's
quite cheap and very easy to drill and cut, and comes single- or
double-sided with resist. Not as stable as proper FR4, of course, but fine
for prototyping. Farnell stocks it, as does Mega. I see from their latest
catalogue that ERS now sells it: http://esr.co.uk

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.con
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

102. Re: MAX 202

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-05 21:45:19 UTC
From: George Demirjian <George.Demirjian@prodigy.net>
Message-ID: <PtKZ7.631$9h.64296070@newssvr16.news.prodigy.com>
Source record: 47644

Maxim seems to have a lot of different variations on this chip, with different packages, speeds, voltages, and configurations with different numbers of drivers and receivers. There must be dozens to choose from, so check their web site.

By the way, they even have at least one model that does not even require external capacitors for the charge pump, but it costs about $5 (US) instead of about a buck. I used a few of these for a project at work a few years ago and they seemed to work fine, though they are probably not cost-effective for home projects. I only used them to reduce parts count, speed up fabrication time (hand-wired), and hey, they government was paying for it anyways (your tax dollars at work, thank you very much).

*** George ***
N6TCG

Martin Meserve <k7mem@myrealbox.com> wrote in message
news:270a577d.0201030730.c85757d@posting.google.com...
> jwodell@provide.net (Jerry W. O'Dell) wrote in message
news:<3c339e7f.2163015@news.provide.net>...
> > Anyone ever use a Maxim 202 to go from TTL to RS232?
> > Sounds a little too good to be true!!!
> >
> > Thanks
> >
> > 73 jerry w8gnd
>
> These Maxim devices have been around for many years now and they work
> as advertised. What is it that sounds to good?
>
> The MAX202 is very similar to the MAX232, in that they are both dual
> TTL to RS232 translators. The MAX202 uses smaller capacitors, 0.1 uF, for
> the internal charge pump but has a slower data rate, 20 kbps. The
> MAX232 uses larger capacitors, 1 uF, and can work at 120 kbps.
> If you need the speed, go with the MAX232.
>
> If you want a list of the various Maxim RS-232 Line Driver/Receivers
> try:
>
>
http://para.maxim-ic.com/compare.asp?Fam=RS232&Tree=Interface&HP=Interface.c
fm
>
> You can sort on the feature that suites your needs.
>

> --
> Martin E. Meserve, K7MEM
>
> I respond to news groups and E-Mail on my own time and therefore
> my responses may not be as timely as you, or I, would like them to
> be. If I seem to be ignoring you, send me another E-Mail to jog my
> memory. Opinions are my own and do not reflect the opinions of my
> employer.

103. METER SHUNT

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-05 21:48:26 UTC
From: BUBBA SMITH <BUBBA49@PRODIGY.NET>
Message-ID: <3C377488.A1F3F329@PRODIGY.NET>
Source record: 47645

Hello to all
I am building a high voltage power supply for a 4-1000 amp which is about 90 percent completed. But I could use a little help with the high voltage meter shunt. I have a 0 to 50 milliampere meter that I want to use with this power supply.
this power supply has an output of 5000 volts. now here is my problem, I don't know what value of resistor to use for the shunt. My math skills are quite poor so I am unsure about how to figure out the shunt value ect.

Thank you
73 de Jim N8SGA

104. Re: METER SHUNT

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-05 22:00:08 UTC
From: "Peter J. Bertini" <commquart@home.com>
Message-ID: <IHKZ7.106595$Y6.10420544@news1.rdc1.ct.home.com>
Source record: 47646

Hello Jim

Is this for measuring the VOLTAGE? If so, you don't want a shunt,
you want a series resistor in line with the meter.

But, remember all currents in a series circuit are equal. At 5,000 volts,
you will need a resistor with at least a 250 watt rating to serve as the
shunt. That is a considerable waste of power. P= I x E. Or,
P = .05 x 5000, 250 watts to have the meter read 50 mA at exactly
5000 volts.

Since the the meter resistance will be negliable, just use ohms law
for Resistance to figure out what value of R is needed to draw 50 mA
at 5,000 Volts.

Pete

"BUBBA SMITH" <BUBBA49@PRODIGY.NET> wrote in message
news:3C377488.A1F3F329@PRODIGY.NET...
> Hello to all
> I am building a high voltage power supply for a 4-1000 amp which is
> about 90 percent completed. But I could use a little help with the high
> voltage meter shunt. I have a 0 to 50 milliampere meter that I want to
> use with this power supply.
> this power supply has an output of 5000 volts. now here is my problem, I
> don't know what value of resistor to use for the shunt. My math skills
> are quite poor so I am unsure about how to figure out the shunt value
> ect.
>
> Thank you
> 73 de Jim N8SGA
>
>
>
>
>
>
>
>
>

105. Re: METER SHUNT

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-05 22:37:55 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <u3f02frb03mdd2@corp.supernews.com>
Source record: 47547

A meter shunt goes in parallel with the meter and is used to increase the full scale current of the meter. To calculate the shunt you need to know the full scale current (which should be about 1/4 more than the normal plate current you want to read), the value of the meter (50 mA in your case), and the meter's internal resistance.

If you want to use the meter to read the power supply voltage then you need a meter multiplier (a resistor in series with the meter). You just use ohms law (R = E / I) to calculate the multiplier resistor BUT you must also be concerned with the amount of power disipated by the resistor and the maximum voltage rating of the resistor. To drop 5000 volts at 50 mA, your resistor is going to disipate 250 watts - way to much for a metering circuit. You need to find a much smaller meter; 1 mA for example. A multiplier resistor meter based on a 1 mA meter will only disipate 5 watts. You can series a number of smaller value resistors in order to limit the voltage drop across any one resistor. Technically you should subtract the internal resistance of the meter from the multiplier resistor value but it is likely small enough not to cause a significant error.

Like the current meter, the full scale reading of your meter should be around 1/4 greater than the anticipate supply voltage so that the meter normally reads about 3/4 scale.

106. Re: METER SHUNT

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-05 22:38:49 UTC
From: n7ws@yahoo.com
Message-ID: <3c378007.64249529@news.triconet.org>
Source record: 47548

On Sat, 05 Jan 2002 22:00:08 GMT, "Peter J. Bertini" <commquart@home.com> wrote:

|Hello Jim
|
|Is this for measuring the VOLTAGE? If so, you don't want a shunt,
|you want a series resistor in line with the meter.
|
|But, remember all currents in a series circuit are equal. At 5,000 volts,
|you will need a resistor with at least a 250 watt rating to serve as the
|shunt. That is a considerable waste of power. P= I x E. Or,
|P = .05 x 5000, 250 watts to have the meter read 50 mA at exactly
|5000 volts.
|
|Since the the meter resistance will be negliable, just use ohms law
|for Resistance to figure out what value of R is needed to draw 50 mA
|at 5,000 Volts.

Damn. Why didn't I think of that; use the bleeder resistor as the HV meter multiplier.

107. Re: Recommended source for copper laminated printed circuit board sought

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-05 23:46:36 UTC
From: Richard Daventry <newsgps_email@ntlworld.com>
Message-ID: <GeMZ7.8370$vf6.1470147@news6-win.server.ntlworld.com>
Source record: 47549
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Leon Heller" <leon_heller@hotmail.com> wrote in message
news:a17k4p$881$1@knossos.btinternet.com...
>
>
> "Richard Daventry" <newsgps_email@ntlworld.com> wrote in message
> news:9fCZ7.40806$Zg2.4922180@news11-gui.server.ntli.net...
> > I'm wanting some copper laminated board about 200mm x 300mm size and
> perhaps
> > even larger. I've never used this before and wonder if any homebrewer
out
> > there can recommend a good place to obtain this product in the UK. I
know
> > Maplin & RS sell this stuff, just wondering if there are other vendors
> > offering maybe a better deal or whatever. I see different variations of
> > laminated board is made, I'm just after your regular common-all-garden
> > stuff (whatever that designation is, anybody know?). Thanks.
>
> Do you want the resist coated stuff, or uncoated?

Not sure what you mean. Copper coated or not copper coated I think. I'm
after copper coated.

> The best stuff I've found is the paper composite with thin fibreglass.
It's
> quite cheap and very easy to drill and cut, and comes single- or
> double-sided with resist. Not as stable as proper FR4, of course, but fine
> for prototyping. Farnell stocks it, as does Mega. I see from their latest
> catalogue that ERS now sells it: http://esr.co.uk

What is Mega?

Appropriate ESR catalogue:

http://www.users.zetnet.co.uk/esr/2001Cat43_54.pdf

Problem is I cannot get much use out of this catalogue. It's difficult to
handle. I cannot save it and browse of offline, or copy and paste it into
Word. Odd for a catalogue.

108. Re: Recommended source for copper laminated printed circuit board sought

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-06 00:05:17 UTC
From: Richard Daventry <newsgps_email@ntlworld.com>
Message-ID: <WvMZ7.8530$vf6.1483758@news6-win.server.ntlworld.com>
Source record: 47550
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Richard Daventry" <newsgps_email@ntlworld.com> wrote in message
news:GeMZ7.8370$vf6.1470147@news6-win.server.ntlworld.com...
> Appropriate ESR catalogue:
>
> http://www.users.zetnet.co.uk/esr/2001Cat43_54.pdf
>
> Problem is I cannot get much use out of this catalogue. It's difficult to
> handle. I cannot save it and browse of offline, or copy and paste it into
> Word. Odd for a catalogue.

Somehow I got it to print. Horrible trying to view it though online.

109. Re: Recommended source for copper laminated printed circuit board sought

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-06 00:09:35 UTC
From: Richard Daventry <newsgps_email@ntlworld.com>
Message-ID: <1AMZ7.8575$vf6.1489471@news6-win.server.ntlworld.com>
Source record: 47551
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Richard Daventry" <newsgps_email@ntlworld.com> wrote in message
news:GeMZ7.8370$vf6.1470147@news6-win.server.ntlworld.com...
> What is Mega?

Okay, Mega Electronics.

http://www.megauk.com/

110. Re: Recommended source for copper laminated printed circuit board sought

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-06 00:26:45 UTC
From: Richard Daventry <newsgps_email@ntlworld.com>
Message-ID: <_PMZ7.8711$vf6.1505573@news6-win.server.ntlworld.com>
Source record: 47552
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Ian White, G3SEK" <G3SEK@ifwtech.com> wrote in message
news:YzTwVfBpyyN8EAwI@ifwtech.com...
> Maplin, RS and Farnell are OK for small quantities, but you pay for the
> privilege. Mega Electronics are much better for larger sheets, and all
> kinds of PCB-making materials. All addresses are on my website in the
> 'In Practice' section.
>
> However, before trying any of those, look in Yellow Pages for 'Printed
> Circuit Services', find someone local and give then a call - they're
> bound to have lots of offcuts.

Okay. I just now got to your pages and seen the links. Thanks.

111. Re: TI Zener Diode Colour Coding

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-06 01:44:16 UTC
From: tom_bruhns@agilent.com
Message-ID: <3832adca.0201051744.68389196@posting.google.com>
Source record: 47553

Gee, the ones I have in my junque-box are in the 1N7xx series
(mostly), and the colourcode is violet-x-x, just dropping the 1N part.
But obviously (?) you have something different. You could perhaps
rig up a higher voltage tester by rectifying your mains voltage, with
a modest filter capacitor (with appropriate shunt bleeder resistor),
and feeding the diode under test through a high-value resistor,
perhaps 100k ohms or so (thinking that if you rectify your 240V mains
you'll get around 300V...) Be careful, of course, but if you wire
things up and measure voltage with a meter which is independent of the
mains and just plug the thing in and read the meter from a distance,
it should all be safe.

Cheers,
Tom

Dick <dick@langwang.demon.co.uk> wrote in message
news:<3R7oOGAuSzN8EwWh@langwang.demon.co.uk>...
> Can anyone remember how to decode the coloured bands TI used
> to mark their small (300mW ?) Zener Diodes years ago. I've got a pile in my
> junk box marked Brown-Brown-Brown, Brown-Orange-Brown & Orange-
> Orange. I think it was the same as resistor colour coding but that would
> make the BBB & BOB 110 & 130v respectively & my DC PSU will only give
> me 60v so I can't check w/o making up a jury rigged PSU.
>
> Thanks for reading the e-mail

112. Re: METER SHUNT

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-06 02:52:04 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <oZOZ7.246458$Zd.21552908@bin1.nnrp.aus1.giganews.com>
Source record: 47554

You can use the meter to measure the current drawn from the power supply. If you want a 500 mA full scale reading you will need a shunt which is 1/9 the meter resistance.

However meters are usually wound with copper wire and thus have a considerable temperature coefficient of resistance. A better way would be to use a shunt that provides a few volts for the meter circuit, then use a series resistance with the meter.

However if you wish to measure the Voltage of the power supply, the 50 mA meter is too insensitive. Better to find a more sensitive meter and put a series resistor with it to the high tension lead. Wasting 50 mA for the measurement is poor practice. One milliampere is the most you should draw, and perhaps less. Find a 200 microampere full scale meter to do the most conventional job. For 5 kV full scale, you will need 25 megohms of multiplier. But it needs to be a high quality resistor or the reading won't be accurate. Good practice requires shunting the meter with a high resistance so that if the movement opens, the tail end of the series resistor won't be at 5 kV and thus arc within the meter.

113. Re: METER SHUNT

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-06 03:13:34 UTC
From: Sparks W4EAS <sparksw4eas@mindspring.com>
Message-ID: <3C37C0DE.5588@mindspring.com>
Source record: 47555

You "Don't" use a "shunt" for a voltmeter... You use a "series" meter multiplyer... A "shunt" is used to increase a current meter for a higher range... Normaly use a 0 to 1 ma meter, Put a new 0 to 5000 volt scale on it, Then use 1 meg per Kv for the multiplyer.. Be CAREFUL, It sounds like you may not have the experience needed to work around HV and hi power amps/Power supplies. Regards Sparks W4EAS

114. NEED MANUAL FOR ALINCO DJV5TH

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-06 04:20:15 UTC
From: sefritts@bellsouth.net
Message-ID: <3c37d071.360034@news.lig.bellsouth.net>
Source record: 47556

Hello,

I need the manual for an Alinco DJV5TH. can anyone help me?

Steve WA4GZE

115. Re: at what point will a germanium detector 'detect'?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-06 13:27:19 UTC
From: tech.stevea@talk21.com
Message-ID: <c5e0f038.0201060527.6392d817@posting.google.com>
Source record: 47557

"Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message
news:<3C36A334.43427DA7@clifto.com>...
> Biggles wrote:
> > I was able to get hold of a paper on the internet which models (theory
> > and practice) the distortion generated by a diode detector.
>
> Where did you find it?

Found it on:

http://www.thebizlink.com/am/tech/htm/tutor.htm

Hope this helps!

116. Re: METER SHUNT

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-06 15:38:35 UTC
From: Brian Reay <brian.reay@bigfoot.com>
Message-ID: <rb_Z7.1611$6q2.496229@news2-win.server.ntlworld.com>
Source record: 47558

"BUBBA SMITH" <BUBBA49@PRODIGY.NET> wrote in message
news:3C377488.A1F3F329@PRODIGY.NET...
> Hello to all
> I am building a high voltage power supply for a 4-1000 amp which is
> about 90 percent completed. But I could use a little help with the high
> voltage meter shunt. I have a 0 to 50 milliampere meter that I want to
> use with this power supply.
> this power supply has an output of 5000 volts. now here is my problem, I
> don't know what value of resistor to use for the shunt. My math skills
> are quite poor so I am unsure about how to figure out the shunt value
> ect.
>
> Thank you
> 73 de Jim N8SGA

I have to ask: What on earth or you running from this? 1000A at 5000V is
5MegaW (ignoring power factor). Are you trying to bounce a signal off the
moon or to toast the green cheese there?

73

Brian
G8OSN

117. Re: Recommended source for copper laminated printed circuit board sought

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-06 15:50:13 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <a19rnl$14t$1@helle.btinternet.com>
Source record: 47559
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Richard Daventry" <newsgps_email@ntlworld.com> wrote in message
news:GeMZ7.8370$vf6.1470147@news6-win.server.ntlworld.com...
> >
> > Do you want the resist coated stuff, or uncoated?
>
> Not sure what you mean. Copper coated or not copper coated I think. I'm
> after copper coated.

I meant photo-resist. You can get the material with photo-resist, or
without, so you can apply your own.

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.con
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

118. Two CO Lines Interface Device/Circuitry

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-06 16:06:13 UTC
From: n/a <not@vailable.int>
Message-ID: <VB_Z7.55492$Z24.14280814@typhoon.jacksonville.mediaone.net>
Source record: 47560

Hi,

I have a need to coupling a VoIP device to a CO Line so that
incoming calls will/can be forwarded to the CO line to make
out-going calls. I know Radio Shack used to carry such a device
back in the 70's; however, it has since been discontinued.

If you know where I can get or know how to build such a device,
it certainly would be nice if you can please post the response
to this NG or e-mail to me at "mazilo @MSN. com" (no spaces).

TIA.

119. Re: METER SHUNT

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-06 17:21:33 UTC
From: "Peter J. Bertini" <commquart@home.com>
Message-ID: <xI%Z7.106609$Y6.10423724@news1.rdc1.ct.home.com>
Source record: 47561

Brian..... 4-1000 is a tube.

"Brian Reay" <brian.reay@bigfoot.com> wrote in message
news:rb_Z7.1611$6q2.496229@news2-win.server.ntlworld.com...
> >
> I have to ask: What on earth or you running from this? 1000A at 5000V is
> 5MegaW (ignoring power factor). Are you trying to bounce a signal off the
> moon or to toast the green cheese there?
>
> 73
>
> Brian
> G8OSN
>
>
>

120. FS: electronic gear

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-06 19:04:01 UTC
From: Mike Hall <mghall@enteract.com>
Message-ID: <3C389FA1.CD885F50@enteract.com>
Source record: 47562
Cross-posted to: chi.forsale,sci.electronics.equipment,rec.radio.amateur.homebrew

```
For sale:
EPROM/pal/gal/microcontroller programmer
Tektronix/Sony Oscilloscope
Please see the 'GEAR' listing on my web page.

Thanks!
--
Mike Hall
http://www.enteract.com/~mghall
AB9CO EN51VT
```

121. ARNewsline 1273 - Jan 4 2002

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-06 19:19:49 UTC
From: radionews@aol.com
Message-ID: <20020106141949.08107.00000034@mb-fi.aol.com>
Source record: 47563

AMATEUR RADIO NEWSLINE(tm) REPORT #1273 - January 4 2002
(Total Running Time with RAIN Promo: 24:48)

==========

A NOTE TO THOSE WHO ONLY “READ” AMATEUR RADIO NEWSLINE(tm)

For those of you who only know of the Amateur Radio Newsline (tm) as a text newsletter we would like to invite you to listen to the audio version. This Amateur Radio Newsline (tm) script is actually written for the “spoken word.” It is recorded each by professional broadcasters and is available for private listening or rebroadcast over your repeater. Three methods of delivery are available: Streaming audio using RealAudio, FTP RealAudio, FTP MP3 or dial-in telephone. Please visit our website at http://www.arnewsline.org for a list of telephone numbers (you have to pay your own long distance charges) and links to audio servers providing our voice newscast. On site free FTP Downloads are available at our site by clicking on the newscast number at the top of the page.

de
The Newsline Production Team

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Amateur Radio Newsline report number 1273 with a release date of Friday, January 4 2002 to follow in 5-4-3-2-1.

The following is a Q-S-T. A “V-E team” finds a way to test kids in one of the most remote regions of the country and the FCC again says no to expanding PRB-. These stories are first on Amateur Radio Newsline report number 1273 coming your way right now.

(Billboard Cart Here)

**

HAM RADIO TESTING REACHES WHITE MOUNTAIN ALASKA

Ham radio examinations have finally come to one of the remotest areas of the nation. This, after a team of examiners from the W5YI VEC perform a fly-in examination session in White Mountain Alaska. Amateur Radio Newsline’s Norm Seeley, KI7UP, has the details:

--

White Mountain is a remote fishing village in the far North-West of Alaska. It’s major claim to fame is that its the next to the last checkpoint for the famed Iditarod dog sled race. And it wanted someone to come in and give ham

radio exams.

The closest big city is Nome. White Mountain is only about sixty miles from Nome but its over some rather treacherous terrain. There are no roads in or out and all supplies to White Mountain have to be delivered by plane or boat.

But White Mountain does ham a ham radio operator for its mayor. He is reindeer farmer Tom Gray KL0CQ. And one of its school board members is Eric Morris KL7HT. Both will tell you that a temperature of minus 40 degrees Fahrenheit and a wind-chill factor of minus 100 degrees is not uncommon in winter. These were the conditions faced by a four member W5YI VEC test team when it chartered a plane and flew in on December 11th to administer exams to four adults and fourteen youngsters who were determined to make ham radio a part of their life.

The trip which cost $800 for the flight alone was sponsored by the Seward Peninsula Amateur Radio Club. Braving the weather were examiners Ramon Gandia AL7X, Michael Nurse KL7UJ, Scott Webber AL7RJ and Thomas Busch NL7H. Al four are from Nome. Most of those to be tested came from the Bearing Strait School District’s only inland school. They had all been studying for their Amateur license as part of a search and rescue course. Neither the applicant or the VE team were disappointed. All eighteen passed the Technician class exam.

For the Amateur Radio Newsline, I’m Norm Seeley, KI7UP.

--

Those involved in ham radio testing are keenly aware of the problems faced by remote areas of Alaska. At last July’s VEC Conference in Gettysburg Pennsylvania Jim Wiley KL7CC told the group that many applicants in Alaska are denied n Amateur Radio license exam due to the inaccessibility of their locations or the high cost of travel in that state. (W5YI)

**

HAM RADIO AND THE LAW: FCC SAYS NO ON PRB-1 EXPANSION REQUEST

Ham radio has lost yet another battle against deed restrictions, but the war is not over yet. At least that’s what the ARRL appears to be saying in a bulletin that describes the latest skirmish with the FCC over this politically volatile issue.

In the latest round, the FCC has affirmed a November 2000 staff-level decision that declined to include privately imposed deed covenants, conditions and restrictions under the limited federal preemption known as PRB-1. That’s the federal government policy requires municipalities to ''reasonably accommodate'' amateur communication in antenna-related zoning and regulation.

The ARRL last year appealed to have the full FCC review the earlier denial. The Commission turned down the League's Application for Review December 18 in a Memorandum Opinion and Order released December 26. As a result, it now looks as if the ARRL will bypass any further dealings on this issue with the FCC and will look for congressional relief instead.

The FCC itself even hinted that Congressional action by the ham community might be a next logical step. Its memorandum, opinion and order of dismissal did note that if Congress were to see fit to enact a statutory directive mandating the expansion of the FCC’s reasonable accommodation policy that the Commission would expeditiously act to fulfill its obligation there under. Translated: If Congress tells the FCC to include deed restrictions under the provisions of PRB-1, it will be more than happy to do so. (ARRL)

**

HAM RADIO IN SPACE: PROJECT JJ - HE EAGLE HAS LANDED

AMSAT-NA's newest satellite project, known as Project JJ for the past year, now has a new and official name. This, as AMSAT North America President Robin Haighton, VE3FRH, announces that effective January 1, 2002, the satellite will officially be known as 'Eagle'.

The name Eagle was submitted by Bill Allen, W7US, of Tucson, Arizona. It was selected from a list of forty-five names submitted by twenty-nine satellite operators.

For his winning suggestion, W7US will receive a free dinner at the annual AMSAT dinner held during the Dayton Hamvention. We will have more ham radio space related news later on in this weeks Amateur Radio Newsline report. (AMSAT-NA, ANS)

**

BREAK 1

Welcoming in the new year with ham radio news coming to you from the United States of America. We are the Amateur Radio Newsline, heard on bulletin stations around the world, including the N7VGS repeater serving the Salt River Star Valley Wyoming and congratulating 13 year old Devin Cassity, on becoming the youngest ham in South West Wyoming. Devin is now KD7PHN.

(5 Sec Pause Here)

**

EMERGENCY PREPAREDNESS: NORTHERN CAL TOWN CHOOSES HAM RADIO

Ham radio started the year with some very positive public exposure in the Los Angeles Times. The January 1st edition featured an in depth article about a Northern California town that will tap into older technology to prepare for future emergencies.

Worried that a disaster will knock out e-mail and cell phones, Los Altos Hills has decided to turn to its local ham radio community and make it the primary back-up to normal disaster preparedness communications. And as you might expect, the hams are more than ready to oblige

The complete story can be read at the Los Angeles Times website. The complex URL is http://www.latimes.com/news/local/la-000000203jan01.story. (Highlighted by ARNewsline™)

**

AMERICA AT WAR: POPCOMM COLUMNISTS SAYS “DONT TURN THE OTHER CHEEK”

Popular Communications writer Eric Force has some strong words that are obviously aimed at the pacifists who oppose the United States military retaliation against Osuma bin Laden and his al-Quida terrorist network. As a response to those he calls the “do-gooders of the world” who promote turning the other cheek, Force says to look, really look at the attack that brought down New York City’s World Trade Center twin towers. He then says that it could have struck a lot closer to them.

Force says and we quote: “Consider that it could have been you, your mom, dad, brother, sister other relative or a close friend in those planes and buildings who were terrorized, murdered and buried in the rubble.” He adds that just thinking about the incomprehensible terror, suffering and losses incurred by innocent human beings a the cowardly hands of international thugs continues to tear at his heart.

Force has dedicated his latest I-Waves column to the sights and sounds of September 11th that are available on the Internet and to the victims of the tragedy. Its a very compelling article. You can find it starting on page 66 of the January edition of Popular Communications Magazine that’s on newsstands right now. (PopComm)

**

AMERICA AT WAR: FEDS TO AID NYC TV STATION REBUILD

New York television stations will be getting federal help rebuilding transmitters that were destroyed in the September 11th terrorist attack on the World Trade Center. A total of ten New York area stations will receive eight point two million to offset the thirty million to forty million dollar price tag for purchasing and
constructing a new transmission facility.

According to the Broadcasting and Cable newsletter, Senator Charles Schumer managed to secure the funding as addition to emergency aid appropriation for victims of the attacks. As previously reported, there is some speculation that the replacement transmitting facility could be a 1500 to 2000 foot high stand-alone tower constructed near the former site of the Twin Towers. (Broadcasting & Cable)

**

ENFORCEMENT: NAL CANCELED

The FCC has canceled a proposed ten thousand dollar fine that it had issued to Jeffrey Alan Pettrey, This, for his apparent violation of Section 301 of the Communications Act involving operation of an unlicensed radio transmitter.

Back on July 30, 2001, the District Director of the Commission's Columbia, Maryland Field Office issued a Notice of Apparent Liability for Forfeiture in the amount of $10,000 to Pettrey for the infraction. Pettrey filed a response to the N-A-L on August 7, 2001 accompanied by documentation regarding his

inability to pay the proposed fine. After reviewing Pettrey's response, the FCC conclude that cancellation of the proposed $10,000 forfeiture is warranted based on Pettrey’s inability to pay. (FCC)

**

ENFORCEMENT: FCC CANCELS CONVICTED HAMS LICENSE

The FCC has canceled the Amateur license of Kenneth P. Kelly, WT2FBI, of Greensboro North Carolina after Kelly failed to show up for a re-examination. But at the time of the FCC retest order Kelly was otherwise occupied. He was fighting criminal charges in relation to a jamming case in Ohio. We have this report:

--
On November 30, 2001, Kenneth Kelly, the ex-WT2FBI was sentenced to 5 years probation by the Judge H. J. Bressler in a Butler County Ohio court. He had previously been indicted on a 4 th degree felony charge of disrupting public service by his jamming and talking on the Middletown Ohio police radio system.

At his hearing, Kelly agreed to a plea bargain. He admitted his guilt to a reduced charge attempted disrupting public services. At the time the FCC pulled his ham radio ticket Kelly was being held in the Butler County Ohio Jail pending sentencing.

By way of background, a person later proven to be Kelly was first noticed on the Middletown police radio channel the third week of July 2001. Initially the police dispatch radio system was not recording him but that was soon remedied by city radio technicians. After several days of taping, it was observed that the voice on the police radio was similar to one heard on the local 2 meter Amateur frequencies.

Several members of the Dial Radio Club then assisted police by monitoring and taping Kelly on the 2 meter band. Tapes from 2 meters and from the police were then voice printed the aid of computers to check similarities. Dial club members also tried to direction find and locate the signal both on 2 meters and on the police channel.

Through some luck, detectives working with a metro housing police officer and discovered that Kelly was now living in their jurisdiction. After they interviewed him, they felt that he was the person interfering. As the investigation progressed, he admitted to detectives that he may have accidentally transmitted on their frequency by accident. He claimed that his signal may have been mixing with an FM broadcast station and another ham repeater.

But Police did not believe it was accidental, because he was taped trying to talk directly to the police dispatcher and the cars. Later Kelly did admit his guilt and entered into the plea bargain. Now sentence has been passed by both the local court and the FCC.

For the Amateur Radio Newsline, I’m Burt Hicks, WB6MQV, reporting.

--

When he was finally caught Kelly had a Yaesu VX-5 hand held in his possession that had been modified to transmit out of band. The assistance of the Dial Radio Club members is credited with helping to solve this case.

Note: Information and documents from the case can be obtained from the Butler County Ohio Clerk's office or online at: http://www.butlercountyclerk.org/ Click on Butler County Court Records Search. Then enter Kenneth Kelly. (FCC, Dial ARC, others)

**

ENFORCEMENT: MITNICK TO FIGHT TO KEEP HIS HAM LICENSE

Another ham who appears to be getting ready to do battle with the FCC is former computer hacker turned talk show host Kevin David Mitnick, N6NHG. Amateur Radio Newsline’s Bill Pasternak, WA6ITF has the latest:

--

As reported last week, the FCC is challenging Kevin David Mitnick's request to renew his ham radio license. The agency claims that his criminal background raises a substantial and material question of fact as to whether Mitnick possesses the requisite character qualifications to be and remain a commission licensee.

Now, N6NHG has told the U-K Newspaper the Register: "It's just another example of them trying to harass me. Now I've got to spend money to keep a ham license."

Mitnick insists that he has totally abandoned his former ways. The Register article notes that that he was recently called to testify before Congress on federal computer security matters. Also that he spent two days briefing the U-S Commission on National Security on these issues. Mitnick tells the Register that he cannot understand why the government is now questioning his character.

Mitnick is currently the host of the radio program called The Dark Side of the Internet. It airs in the Los Angeles area from 5 to 7 a.m. Sunday mornings over radio station KFI 640 AM. And in a recent appearance on Coast to Coast A-M hosted by Art Bell, W6OBB, Mitnick said that he is hoping for a career in computer security once his term of supervised release from prison has been completed.

For the Amateur Radio Newsline, I’m Bill Pasternak, WA6ITF.

--

The complete Register story and interview with Mitnick is on the web at a rather long and complex U-R-L. You will find it at http://www.theregister.co.uk/content/55/23494.html (Adapted from the Register)

**

INTERNET SECURITY: CIA GOES OUT OF ENCRYPTION COMPANY FUNDING

And speaking of Internet security, word that a Central Intelligence Agency funded company that allowed Web surfers to browse anonymously has closed. According to news reports, Emeryville California based SafeWeb enabled Internet users to gain access to the World Wide Web and browse sites through its encrypted service. This made their on-line habits and history untraceable. In the 2000 - 2001 fiscal year, SafeWeb received one million dollars in funding from the U-S Central Intelligence Agency's venture capital arm. (published reports)

**

BREAK 2

From the United States of America, we are the Amateur Radio Newsline, with links to the world from our only official website - www.arnewsline.org.

(5 sec pause here)

**

HAM RADIO BUSINESS: AMATEUR RADIO TRADER CEASES PUBLICATION

Ham radio Internet auction sites may be responsible for a twice a month ham radio equipment sales magazine going away. This, after Amateur Radio Trader magazine announces that it has ceased publication.

According to Editor Barbara Patterson, KF4MMV, the Amateur Radio Trader was no longer a viable product. She says that the firm will be redirecting its resources into other areas.

Meantime, the company has also pulled its amateuradiotrader.com website off line. But unlike other publications which have gone under, in this case subscribers are being reimbursed for any outstanding issues. In addition to handling buy and sell ads, Amateur Radio Trader also donated page space to advertising the annual Newsline Young Ham of the Year award. (ARNewsline™)

**

HAM RADIO HERITAGE: MAKING WCC A PART OF THE FUTURE

A ham is campaigning to preserve part of radios past and have it become a part of the future. This as Lewis Masson, K1LJ-S, says that the town of Chatham Massachusetts should convert the site of radio station WCC into an Amateur Radio station along with a training curriculum to teach the kids in the area about communications technology.

WCC is one of the original Marconi Marine Radio Stations. Masson is an ex-marine telex operator at WCC. The site was recently turned over to the town of Chatham and Masson believes it is important to preserve the operations building as an operating amateur radio station and keep the hotel building as a museum to preserve and display memorabilia.

Masson says over the Internet that he has formed a committee to work on this project and that they are looking for nationwide support for this campaign. If preserving the past as an investment in the future is of interest to you, please contact K1LJS by e-mail to lemasson@juno.com. (Internet)

**

SPECIAL EVENTS: HAM RADIO UNIVERSITY 2002

A reminder the third annual Ham Radio University event takes place on January 20, 2002. Location is the Babylon Long Island New York Town Hall Annex with the doors opening at 9 a-m Eastern time.

Ham Radio University is a day of education about Amateur Radio. This there will be twenty, one-hour presentations with special forums geared to the non-ham as well as the experienced Amateur Radio operator. The focus will be "hands on" with many demonstrations. Besides the forums, there will be tables set up with information about the different groups, ham radio classes, exam session schedules, public service and other activities.

For more information about Ham Radio University, please contact its Chairman Phil Lewis N2MUN by e-mail to n2mun@optonline.net. You can also get in touch with ARRL New York and Long Island Section Manager, George Tranos N2GA by e-mail to n2ga@arrl.org. Also check the Ham Radio University website for a full list of forums, directions and talk-in information. Its in cyberspace at www.arrlhudson.org/nli/hru2002.htm (N2DO)

**

HAM RADIO RECORDS: BEST OF THE WEST AND VHF CONTEST HONOR ROLLS

Tim Marek, K7XC, says that he has updated W6 / W7 & "Best In The West" VHF Contest Honor Rolls. They are now available at the following web sites.

http://k7xc.tripod.com/VHF_Records/index.html s the stand alone records page. http://k7xc.tripod.com/K7XCweaksignal/ is where individual links can be found to each contest. (VHF Reflector)

**

HAM RADIO SCIENCE: NEW 6 METER PROPAGATION BEACON IN WASHINGTON STATE

Rich Ewing, KO7N reports over the VHF Reflector that Bruce Shurtz, W7BAS, has installed a propagation beacon in gridsquare CN87TG near Kennmore Washington. It operates on 50.069 MHz putting out 10 watts to a 5 element yagi pointing 90 degrees. The beacon is operational 24 hours a day, seven days a week. QSN reports go to W7BAS, at his callbook address. (VHF Reflector)

**

HAM RADIO IN SPACE: VERY FEW LAUNCHES

Peter Guezlow, DB2OS, reported that 2001 has turned out to be the slowest year for space launches in nearly 40 years. Ham radio or otherwise. According to DB2OS, only 58 flights reached orbit, and there was one complete failure.

Guezlow says that historians note that we must look back to 1963 to find a year that produced fewer launches. He says that in 2000 there were 82 launches to orbit plus three failures. By contrast the most productive year was 1984 when 129 launches delivered payloads into orbit.

But there is at least one bright note. Russia successfully placed five satellites into orbit recently after launching them aboard a Zenit rocket. The cargo rocket, carrying three Russian, one Moroccan and one Pakistani satellite, took off from the Baikonur space center in Kazakhstan. (AMSAT, ANS)

**

HAM RADIO IN SPACE: NEW INDIA WEBSITE

The AMSAT-India website has been officially launched recently by the government of India and the Department of Space. VU2POP says that you can check it out by taking your browser over to www.amsatindia.org. (ANS)

**

CONTESTS: HUNTING LIONS ON THE AIR

The 31st annual Hunting Lions in the Air contest will take place on the weekend January 12th to the 13th. The contest period will be 48 hours and will run from midnight UTC Friday night to midnight UTC Sunday night, and all hams are welcome to participate.

According to its sponsors, the objective of this operating event is to create and foster a spirit of international understanding and cooperation among radio amateurs and members of the Lions Clubs through the use of world-wide radio communication. The contest also commemorates the birthday of Melvin Jones, the founder of the Association of Lions Clubs who was born at Ft. Thomas, Arizona on January 13, 1879. (Q-News)

**

DX

In DX, word that the recently postponed Ducie Island Dxpedition is on again for March. Ducie Island became a DXCC entity last November and it immediately jumped to the top of the most wanted contact list. But rough seas scuttle the first attempt to put it on the air. (RSGB)

Meantime 6 meters continues to be the V-H-F D-X band of choice. On Monday December 31st, Kevin Bishop WB8XX, says that he started hearing O-H-1-X-T at 1300 U-T-C on a backscatter path. From then on until 1620 U-T-C he worked 8 new countries and over thirty new grids in Europe and Asia. (VHF Reflector)

**

STRANGE TECHNOLOGY: ARE CELLPHONES KILLING GHOSTS?

Now, from radio communications to the effect of radio communications on supernatural communications. This, as a British expert who has spent years researching the occult says that cellular and other mobile phones are killing off ghosts. Don Wilbanks KC5MFA has the details:

--

No, we are not kidding you. In fact, Tony Cornell, of the Society for Psychical Research, has told the London Sunday Express that reports of ghost

sightings started to decline when mobile phones were introduced 15 years ago.

According to Cornell, ghost sightings had remained consistent for centuries. In fact, until three years ago the society received one or two new ghost sighting reports every week. But with the introduction of mobile phones 15 years ago, ghost sightings began to decline to the point where they are not receiving any.

And why are there no longer any ghosts being observed? Apparently paranormal events, which many scientists attribute to unusual electrical activity, my be drowned out by the electronic noise produced by cellular telephones and text messaging pager transmitters. And according to the newspaper, the lack of ghost sightings could adversely impact on the nations economy. It says that haunted tourist attractions in Britain could be under threat if the number of cellphones continues to grow from the present figure of about 39 million now in use in the U-K.

Don Wilbanks, KC5MFA.

--

And all of this begs that one question be asked. If ghosts are the spirits of the dead, how can anything actually kill them? (Science Today)

**

NEWSCAST CLOSE

With thanks to Alan Labs, Amateur News Weekly, AMSAT, the ARRL, the CGC Communicator, CQ Magazine, the FCC, the Ohio Penn DX Bulletin, Radio Netherlands, Rain, the RSGB and Australia's Q-News, that's all from the Amateur Radio Newsline(tm). Our e-mail address is newsline @arnewsline.org. More information is available at Amateur Radio Newsline's(tm) only official website located at www.arnewsline.org. You can also write to us or support us at Amateur Radio Newsline(tm), P.O. Box 660937, Arcadia, California 91066.

For now, with Bill Pasternak, WA6ITF, at the editors desk, I’m Mert Garlick, N6AWE, saying welcome to the year 2002, 73 and we thank you for listening."
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**

END NEWSCAST - RAIN PROMO

122. BBC DSA1,2-14A diode data wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-06 20:57:54 UTC
From: CA <sm6pxj@hotmail.com>
Message-ID: <zU2_7.3544$O5.9265@nntpserver.swip.net>
Source record: 47564

Looking for data on the following diode:
BBC DSA1,2-14A

/sm6pxj

123. Re: METER SHUNT

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-06 22:18:17 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3C38CC76.DAD3F592@gte.net>
Source record: 47565

Brian Reay wrote:

> "BUBBA SMITH" <BUBBA49@PRODIGY.NET> wrote in message
> news:3C377488.A1F3F329@PRODIGY.NET...
> > Hello to all
> > I am building a high voltage power supply for a 4-1000 amp which is
> > about 90 percent completed. But I could use a little help with the high
> > voltage meter shunt. I have a 0 to 50 milliampere meter that I want to
> > use with this power supply.
> > this power supply has an output of 5000 volts. now here is my problem, I
> > don't know what value of resistor to use for the shunt. My math skills
> > are quite poor so I am unsure about how to figure out the shunt value
> > ect.
> >
> > Thank you
> > 73 de Jim N8SGA
>
> I have to ask: What on earth or you running from this? 1000A at 5000V is
> 5MegaW (ignoring power factor). Are you trying to bounce a signal off the
> moon or to toast the green cheese there?
>
> 73
>
> Brian
> G8OSN

The 4-1000 is the vacuum tube. And EME typically requires only 500W at 2M and
250W at 23cM and antenna gain in the 20dBi and 30dBi respectively.

Dale W4OP

124. QRP Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 02:06:33 UTC
From: "Mike Jenkins, KG4QJM" <KG4QJM@removethis.IsVirtual.com>
Message-ID: <Jo7_7.53055$8e2.16994339@typhoon.southeast.rr.com>
Source record: 47566

I've just built a Vectronix 80M QRP transmitter. I'm hooked.

What other QRP kits exists? What are some of the pros and cons for them?
Overall, is there a single QRP Kit that is the best of the best?

Thanks,
KG4QJM

125. Re: QRP Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 02:28:00 UTC
From: Brian Short <k7on@earthlink.net>
Message-ID: <MPG.16a314e5bcc06d9f989682@news.earthlink.net>
Source record: 47567

You might consider kits provided by Norcal (Northern CA QRP Club).
Wilderness Radio sells commercial versions of these kits. Also,
the DSW series QRP radios have an excellent reputation.

In article <Jo7_7.53055$8e2.16994339@typhoon.southeast.rr.com>,
KG4QJM@removethis.IsVirtual.com says...
> I've just built a Vectronix 80M QRP transmitter. I'm hooked.
>
> What other QRP kits exists? What are some of the pros and cons for them?
> Overall, is there a single QRP Kit that is the best of the best?
>
> Thanks,
> KG4QJM

126. Re: QRP Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 02:28:48 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <u3i1va4lvgbb1e@corp.supernews.com>
Source record: 47568

> Overall, is there a single QRP Kit that is the best of the best?

Check out the Elecraft K2 at http://www.elecraft.com/

127. Re: Removing scratches form plastic meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 03:01:56 UTC
From: Jim Deane <jimdeane@hot_nospam_mail.com>
Message-ID: <3C390FA4.6030904@hot_nospam_mail.com>
Source record: 47569

BRASSO metal polish works *very* well on plastic. It is a very mild abrasive, polishes to a glass-smooth finish. Doesn't require a heavy touch--just light circular polishing with a cotton cloth.

JD

Dan Richardson wrote:

> Hi,
>
> Would like to get some suggestions for removing fine scratches from
> plastic meter faces (covers).
>
> Thanks,
>
> Danny, K6MHE
>
>
>

128. FRS repeater (construction or otherwise)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 04:15:58 UTC
From: "Andrew H." <and0@west.net>
Message-ID: <3i9_7.226$d4.6875@newsfeed.avtel.net>
Source record: 47570
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

I'm looking for a repeater for FRS-band radios. Is one available? If not, would it be possible to construct one? I'm not adverse to electronic work, by the way. ;) Thanks for any information!

Andrew H.

(Sorry about cross-posting, but I wasn't sure which group to post to.)

129. Passive LC filter design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 04:39:30 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C392682.78CA8E3C@ieee.org>
Source record: 47571

I am working through the math involved in Passive LC filter design.

I have books that give tables of component values on how to do this, all normalized to 1Hz. I am fine with that. All the tables are for designs with no Zeros in the transfer function; they are "All Pole" designs.

In my text on microwave circuit design, it talks about filter synthesis and the designs have Zeros in the transfer function. Obviously, this means that the filter has a capacitor on its input.

What is the real difference? Why should I care? How do I use the methods in the microwave book to synthesize a filter that is all pole?

Any help or direction to literature would be greatly appreciated.

Clyde

KA1CRV

130. Re: FRS repeater (construction or otherwise)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 06:44:15 UTC
From: budgie <budgie@nowhere.cantech.net.au>
Message-ID: <3c394394.2643164@news.cantech.net.au>
Source record: 47572
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Sun, 6 Jan 2002 20:15:58 -0800, "Andrew H." <and0@west.net> wrote:

>I'm looking for a repeater for FRS-band radios. Is one available? If not,
>would it be possible to construct one? I'm not adverse to electronic work,
>by the way. ;) Thanks for any information!

What exactly are you trying to do? That might help answer your
question.

131. Re: METER SHUNT

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 06:49:37 UTC
From: n7ws@yahoo.com
Message-ID: <3c3944c6.180147726@news.triconet.org>
Source record: 47573

On Sun, 06 Jan 2002 22:18:17 GMT, Dale Parfitt <parinc@gte.net> wrote:

|
|The 4-1000 is the vacuum tube. And EME typically requires only 500W at 2M

1500W and 20 dBd is much better.

73,

Wes N7WS

|and
|250W at 23cM and antenna gain in the 20dBi and 30dBi respectively.
|
|Dale W4OP
|

132. Re: at what point will a germanium detector 'detect'?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 07:24:25 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C394D29.218E696C@clifto.com>
Source record: 47574

Biggles wrote:
> "Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message
news:<3C36A334.43427DA7@clifto.com>...
> > Biggles wrote:
> > > I was able to get hold of a paper on the internet which models (theory
> > > and practice) the distortion generated by a diode detector.
> >
> > Where did you find it?
>
> Found it on:
>
> http://www.thebizlink.com/am/tech/htm/tutor.htm

Thanks!

--
Remember, "close" counts in horse-shoes, hand-grenades and nuclear warfare,
but in spamming, it's considered unnecessary precision. -- Alun Jones

133. Re: Passive LC filter design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 08:32:33 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C395D21.B6A9F362@eznec.com>
Source record: 47575

A zero in the transfer function means that there's a frequency at which the response of the filter has zero transmission. All pole filters don't have this property. The design of a filter is a world of tradeoffs among simplicity, sensitivity to component variation, loss when realized with real components, cutoff sharpness, passband and stopband ripple and phase response. In the time domain, some of these combine to determine rise time, overshoot, and settling time. Realization is also a consideration; it's often not possible to obtain real components with the values required by some designs. In filters I've designed, unavoidable parasitics have often been a major consideration, and I've had to use transformation techniques to come up with a topology that would allow me to absorb the parasitics into the filter circuit. Filter design is very much an art as well as a discipline in itself. Choosing whether to use a filter with zeros frequently requires considering a number of tradeoffs.

In general, filters with zeros have more passband ripple and more rapid phase change, hence poorer time response, than ones without. But they're very useful if specific frequencies (such as harmonics) need to be attenuated a great deal, since the zeros can often be placed at or near the frequencies where large attenuation is needed.

Nearly all filter synthesis books I've seen are either pretty general and theoretical (such as Van Valkenburg's _Introduction to Modern Network Synthesis_) or tend to concentrate on one class of problem. I haven't kept up to date, but some time ago a book by Zverev (sorry, I never got a copy and don't recall the name) was widely regarded to be the most useful for practical design, but I don't know how deeply it went into the theory. Computer programs have surely replaced the extensive design tables in that book.

Roy Lewallen, W7EL

"Clyde R. Shappee" wrote:
>
> I am working through the math involved in Passive LC filter design.
>
> I have books that give tables of component values on how to do this, all
> normalized to 1Hz. I am fine with that. All the tables are for designs
> with no Zeros in the transfer function; they are "All Pole" designs.
>
> In my text on microwave circuit design, it talks about filter synthesis
> and the designs have Zeros in the transfer function. Obviously, this
> means that the filter has a capacitor on its input.
>

> What is the real difference? Why should I care? How do I use the
> methods in the microwave book to synthesize a filter that is all pole?
>
> Any help or direction to literature would be greatly appreciated.
>
> Clyde
>
> KA1CRV

134. NEW TUBE Forsale ! to the serious Amp Builder !

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 13:05:43 UTC
From: alishome@uraxis.com
Message-ID: <13872e1d.0201070505.3e4ac0d9@posting.google.com>
Source record: 47576

I purchased the following with the Intention of Building up
a second large HF Amplifier !
The Project has been cancelled, and therefore offered
to the serious Builder !

New in Eimac Box YC-243=3CX6000A7 Triode
New 80amp/240v Peter Dahl Fil. Tranny
New Chimney
New Peter Dahl Filament Chokes
Complete Package Price=$1200.00
The tube alone retails for this Price !
Buy the TUBE and the rest is free!

* The nice thing about this New Tube is the Mounting aspect!
No Socket is required , the Grounded + Grid ring , is
the "Flange mount" and the Chimney fits over the Tube
Its that Simple !

NOTE* I will split the shipping etc.!

73,s to ALL AL

135. Re: FRS repeater (construction or otherwise)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 13:21:47 UTC
From: john graesser <graesser@tca.net>
Message-ID: <u3j840ih0c1r71@corp.supernews.com>
Source record: 47577
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

"Andrew H." <and0@west.net> wrote in message
news:3i9_7.226$d4.6875@newsfeed.avtel.net...
> I'm looking for a repeater for FRS-band radios. Is one available? If
not,
> would it be possible to construct one? I'm not adverse to electronic
work,
> by the way. ;) Thanks for any information!
>
> Andrew H.

There are many(several) gmrs repeaters around the country. Do you want to put up a simplex repeater (records then repeats the signal normally on the same frequency) or a duplex repeater (simultaneous recieve and transmit on a different frequency)?

Each type of repeater is possible using gmrs radios (same frequencies as frs), it just won't be cheap to put up a tower, antenna, radios, repeater controller etc.

The few gmrs repeaters I have heard about were subscription only. You had to pay to use them. Not something for the casual frs user.

Anyone who can put up a 440 repeater could do the same for gmrs/frs, it would use similar antennas and feed line.
thanks, John.
KC5DWD

136. Re: QRP Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 13:42:51 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3C39A527.A3A111D8@gte.net>
Source record: 47578

"Mike Jenkins, KG4QJM" wrote:

> I've just built a Vectronix 80M QRP transmitter. I'm hooked.
>
> What other QRP kits exists? What are some of the pros and cons for them?
> Overall, is there a single QRP Kit that is the best of the best?
>
> Thanks,
> KG4QJM

Take a look at Elecraft - the Cadillac of kits.

Dale W4OP

137. Kit companies?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 14:26:52 UTC
From: KC8PMX <kc8pmx@tm.net>
Message-ID: <Mei_7.16$xu.2005@newshog.newsread.com>
Source record: 47579

Does anyone have the URL's for any kit building manufacturers? I have the one for Ramsey but am looking for others. I am a newbie when it comes to this, and want to try learning a little bit more through the making of some kits.

Thanks,

Ryan, KC8PMX

138. WWV-only rcvr?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 15:10:29 UTC
From: mikea@mikea.ath.cx
Message-ID: <FTi_7.3340$C54.626325613@newssvr15.news.prodigy.com>
Source record: 47580

Anyone got plans/partlists/schematics for something to pull in _only_ 2.5, 5, 10, 15, and 20 MHz. -- maybe all five at once, for frequency diversity? Or do I get to design and build it myself? I followed a link to AADE.COM (Almost All Digital Electronics) from the Google search results, but came up dry.

--
"I sense much NT in you. NT leads to Blue Screen, Blue Screen leads to downtime, downtime leads to suffering. NT is the path to the Dark Side."

139. Re: FRS repeater (construction or otherwise)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 16:34:51 UTC
From: ac6v <hamguide73@ix.netcom.com>
Message-ID: <3C39CE2B.222D6782@ix.netcom.com>
Source record: 47581
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

Best read the FCC rules on FRS - see URL:
http://wireless.fcc.gov/prs/famrad.html

I think an FRS Repeater would be illegal.

However see GMRS
http://wireless.fcc.gov/prs/genmbl.html

"Andrew H." wrote:

> I'm looking for a repeater for FRS-band radios. Is one available? If not,
> would it be possible to construct one? I'm not adverse to electronic work,
> by the way. ;) Thanks for any information!
>
> Andrew H.
>
> (Sorry about cross-posting, but I wasn't sure which group to post to.)

--
73 From AC6V, Rod In Oceanside, CA
I doubt, therefore I might be!
http://ac6v.com

140. Re: Kit companies?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 16:36:26 UTC
From: ac6v <hamguide73@ix.netcom.com>
Message-ID: <3C39CE8A.1D767D7@ix.netcom.com>
Source record: 47582

Yep -- see URL:
http://ac6v.com/kits.htm
--
73 From AC6V, Rod In Oceanside, CA
I doubt, therefore I might be!
http://ac6v.com
==========

KC8PMX wrote:

> Does anyone have the URL's for any kit building manufacturers? I have the
> one for Ramsey but am looking for others. I am a newbie when it comes to
> this, and want to try learning a little bit more through the making of some
> kits.
>
> Thanks,
>
> Ryan, KC8PMX

141. M9755/9850

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 18:12:26 UTC
From: Xu <salers@hamal.freemail.ne.jp>
Message-ID: <a1cocnebi1@mail.cn99.com>
Source record: 47583

Hi!
Anyone the M9755 and M9850 VHF(UHF?) power transister's specs?
Thanks in advance
73! Xu

142. Re: Kit companies?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 18:55:57 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u3jrrjifu98o40@corp.supernews.com>
Source record: 47584

Hey - Ryan

The QRP Amateur Radio Club International:

http://www.qrparci.org

has a fairly extensive list of links for kit suppliers. Unfortunately, many of the more fun kits (unusual, low priced, etc.) tend to be produced by clubs (NorCal, NoGa, NJQRP, Flying Pigs) and only for a short time. If you aren't in touch with what's happening when it happens, you can miss the opportunity.

The QRP-L reflector does give you a chance to keep up with a lot of what's going on, and is a good way to get feedback on QRP kits. But it is a very high-volume list, so you better know how to work your inbox rules! Subscription information and archives at:

http://qrp.lehigh.edu/lists/qrp-l/

A somewhat less intense (and consequently less useful) forum is the QRP-F:

(http://www.e-discounter.net/qrparci/).

Ten-Tec has some VHF kits, but the prices are higher than already built commercial rigs with more features. VHF kits seem to be few and far between

..

"KC8PMX" <kc8pmx@tm.net> wrote in message
news:Mei_7.16$xu.2005@newshog.newsread.com...
> Does anyone have the URL's for any kit building manufacturers? I have the
> one for Ramsey but am looking for others. I am a newbie when it comes to
> this, and want to try learning a little bit more through the making of
some
> kits.
>
> Thanks,
>
> Ryan, KC8PMX
>
>
>

143. Re: FRS repeater (construction or otherwise)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 19:26:00 UTC
From: Skipp <skipp@pilotNOSPAMPLEASE.ucdavis.edu>
Message-ID: <a1cso8qvd2@woodrow.ucdavis.edu>
Source record: 47585
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hi Andrew,

FRS is a special class of service where only very low power direct communication is possible as designed. The typical cheap'o frs radio will not do repeater frequency splits.

It is possible and quite common to put a voice recorder/playback unit on a simplex (non repeater) frs radio. It will record what every it hears, then play it right back after the transmission is over. That type of circuit and its operation is often refered to as repeater. In true repeater lingo, it's only a voice record playback unit. More of a toy than anything else.

Right next to the "splinter channel" frs frequencies are the original UHF GMRS and business band frequencies where both simplex and duplex (repeater) operation is legal. If you wanted to use a UHF band Repeater, you would put up your own or rent time on one. That's kind of what I do out here in Northern California (Sacramento, Northern SF Bay Area). Its very cheap to rent use of a GMRS Repeater.
By design, you are not really supposed to do business on GMRS, but again... you can use a business license on a proper frequency right next to it to get your work done.

On the Mountain Tops I deal with, we have combinations of business and gmrs repeaters. Most of the newer common radios do both. The thought is to talk to your business on the proper channel, then change to your home gmrs "family" channel and call home/other people for non business needs.

Radios are blowing out of the stores that do all kinds of services. You could by a good UHF radio and use it for all the services. Power Output on the frs band would have to be reduced to the very low limit, but most of the newer radios can program the proper changes right in.

FRS is for close in work and play (real world is about 1 mile range on level ground).

Business and GMRS repeaters can extend your range for an easy 120 mile (or more) diameter circle (of the repeater location) in good locations.

Hope that helps...

cheers
skipp@pilot.NOSPAMPLEASEucdavis.edu

Take out the NOSPAMPLEASE if you want to Email me with questions.

: In rec.radio.amateur.homebrew Andrew H. <and0@west.net> wrote:
: I'm looking for a repeater for FRS-band radios. Is one available? If not,
: would it be possible to construct one? I'm not adverse to electronic work,
: by the way. ;) Thanks for any information!
: Andrew H.
: (Sorry about cross-posting, but I wasn't sure which group to post to.)

144. Re: METER SHUNT

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 20:19:10 UTC
From: Brian Reay <brian.reay@bigfoot.com>
Message-ID: <von_7.7449$6q2.1887352@news2-win.server.ntlworld.com>
Source record: 47586

"Peter J. Bertini" <commquart@home.com> wrote in message
news:xI%Z7.106609$Y6.10423724@news1.rdc1.ct.home.com...
> Brian..... 4-1000 is a tube.
>
Oh, I see. I could try and give a smart arse response and say:

1. What is a tube?
2. We gave up VALVES in the 'old country' years ago.

But the truth would be that I didn't recognise the part number!

73
Brian
G8OSN

145. Re: FRS repeater (construction or otherwise)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 20:49:23 UTC
From: "D. Stussy" <kd6lvw@bde-arc.ampr.org>
Message-ID: <Pine.LNX.4.10.10201072049030.15989-100000@exp.bde-arc.ampr.org>
Source record: 47587
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Sun, 6 Jan 2002, Andrew H. wrote:
>I'm looking for a repeater for FRS-band radios. Is one available? If not,
>would it be possible to construct one? I'm not adverse to electronic work,
>by the way. ;) Thanks for any information!

FRS doesn't allow repeaters.

The full-blown GMRS does.

146. Re: building a microphone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 20:58:48 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0201071258.5acbe144@posting.google.com>
Source record: 47588

"willy" <willyacht@yahoo.com> wrote in message
news:<FO7Y7.55602$HW3.27948@newsfeeds.bigpond.com>...
> The simplest way to make a microphone is to use a speaker! Thats right any
> old speaker will do, but the better performance comes from modern speakers.
> The bass response is superb, it actually puts to shame the audio of those
> guys on 14.178 using million dollar everything. Try it you will be amazed.
> It works really well on the older Kenwood radios like the TS5XX, TS8,xx
> series of radios. You may need to build a small op amp or low noise
> transistor pre-amp on modern radios. Only problem with this device is that
> it is large, you cant see the rig when talking. You get amazing results with
> large 8 inch and 10 inch cones.
> But as for quality i would give it a 10/10.

I'll have to try that sometime just for kicks. It would be very easy
for me to try as I already have a preamp set up for icom , and I can
plug any element into the base with a 1/8 inch jack. I also could try
it on a 830. I don't know about 8-10 inch speakers, but I might try a
4-5 incher just to see what it does. The best mike I've found so far
is an old audio technica dynamic I got free in a junk pile.
As far as normal mikes at a decent price anyway. I think $ for $, a
semi cheap dynamic studio mike is about the best deal for the dollar.
You can buy shure versions at rat shack for 20-40-60+ bucks. I think
MARS and most the other music stores have audio technica and other
brands. Compared to spending nearly 200 bucks for a factory electret
desk mike that are typical these days, they are a much better deal.
Sound better too. You do have to rig a PTT and base though. I just
mount it on an old junk base. My A/T mike is mounted on an old turner
plus three base. That way I get the lock down PTT. MK

147. Re: Wiring diagram + schematic for Turner +3 Mic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 21:01:36 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0201071301.76cadc46@posting.google.com>
Source record: 47589

w3nj@aol.com (W3NJ) wrote in message news:<20011230171719.24922.00002547@mb-md.aol.com>...
> Hello,
> I'm looking for documenation on the Turner +3 Microphone. Wiring diagrams and
> schematics appreciated. Also would like to know how to ire it up to support VOX
> operation.
>
> Tnx es 73!

I don't have any info on it. I have one, but gutted it out ages ago
and just use the base. All you need to do to get the vox going is jump
the element hot wire so it's not controlled by the PTT switch. Jump it
so it's hot all the time. MK

148. Re: QRP Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 23:11:24 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c3a2a63.3276755@news.freeserve.net>
Source record: 47590

On Mon, 07 Jan 2002 13:42:51 GMT, Dale Parfitt <parinc@gte.net> wrote:

>
>
>"Mike Jenkins, KG4QJM" wrote:
>
>> I've just built a Vectronix 80M QRP transmitter. I'm hooked.
>>
>> What other QRP kits exists? What are some of the pros and cons for them?
>> Overall, is there a single QRP Kit that is the best of the best?
>>
>> Thanks,
>> KG4QJM
>
>Take a look at Elecraft - the Cadillac of kits.
>
The Rolls Royce (what the hell is a cadillac) of kits. ;-)
Mike W, G8NXD

149. Re: WWV-only rcvr?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 23:24:09 UTC
From: "Peter J. Bertini" <commquart@home.com>
Message-ID: <t6q_7.106620$Y6.10431246@news1.rdc1.ct.home.com>
Source record: 47591

Mike,

I thought MFJ made one. Also, I see a few commercial WWV
receivers pop up on eBay from time to time.

Pete

"Mike Andrews" <mikea@mikea.ath.cx> wrote in message
news:FTi_7.3340$C54.626325613@newssvr15.news.prodigy.com...
> Anyone got plans/partlists/schematics for something to pull
> in _only_ 2.5, 5, 10, 15, and 20 MHz. -- maybe all five at
> once, for frequency diversity? Or do I get to design and
> build it myself? I followed a link to AADE.COM (Almost All
> Digital Electronics) from the Google search results, but
> came up dry.
>
> --
> "I sense much NT in you. NT leads to Blue Screen, Blue Screen leads to
downtime,
> downtime leads to suffering. NT is the path to the Dark Side."

150. Re: WWV-only rcvr?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-07 23:34:25 UTC
From: srh@MailandNews.com
Message-ID: <srh-0701021834250001@15-143.068.popsite.net>
Source record: 47592

In article <FTi_7.3340$C54.626325613@newssvr15.news.prodigy.com>,
mikea@mikea.ath.cx (Mike Andrews) wrote:

> Anyone got plans/partlists/schematics for something to pull
> in _only_ 2.5, 5, 10, 15, and 20 MHz. -- maybe all five at
> once, for frequency diversity? Or do I get to design and
> build it myself? I followed a link to AADE.COM (Almost All
> Digital Electronics) from the Google search results, but
> came up dry.

No source for schematics [sorry!], but if all you need is a working receiver you might haunt second-hand shops or search eBay for an old Radio Shack "TimeCube" receiver. About 4" on a side, telescopic antenna, and push-buttons for (IIRC) 5, 10 and 15Mhz crystal controlled, runs on a 9v transistor radio battery.

/srh
--
Stephen R. Holmes | srh@mailandnews.com

151. FS: 200AMP 12V Supplies: $40

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 00:13:41 UTC
From: Stuart Blake Tener <stuart@misty.com>
Message-ID: <a1ddjd$t9$1@news.misty.com>
Source record: 47593
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

Fellow hams:

Okay! Now that I got your attention, I bought for $40 a bunch of PC power supplies, and I am curious about how I can combine them into one supply!

They have a 25amp 5V output on each one, and an 8amp 12V output on each one.

I am curious to know what or how I can:

(a) combine the 5V outputs from 3 supplies to yield me a combined 25amp 15V source (presuming three are powered up at once)?

(b) take 3 8amp 12V outputs and merge them into a single 24amp 12V output

I have PC supplies out the a$$, and wish to combine them to build a massive 200amp supply, any ideas how to do this? I long ago forgot my electronics theory with regard to power supplies, and I think you need diodes or something to keep the electricity from flowing from one supply to the other.

Stuart
Beverly Hills, CA

152. Re: FRS repeater (construction or otherwise)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 01:14:17 UTC
From: Carl <n7kuw@dropthisnospam.attbi.com>
Message-ID: <JJr_7.24293$Sf2.221769@rwcrnsc52>
Source record: 47594
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

> Each type of repeater is possible using gmrs radios (same frequencies as
> frs), it just won't be cheap to put up a tower, antenna, radios, repeater
> controller etc.
>

Actually, the GMRS frequencies that permit repeater operations are different from FRS frequencies. Actual repeaters (simultaneous re-transmission of the input on a different output frequency) are not allowed on FRS. Store and forward may be (that is a separate debate in itself).

GMRS and FRS share 7 frequencies. No repeater operations are allowed on those 7 frequencies.

As to cost, if you go buy new equipment and pay someone to do the work (like tower climbing and antenna installation), you can probably put up a repeater for somewhere between $5,000 and $10,000. Then you have recurring site rent, insurance, etc. If you are on a regular commercial site, expect to pay anywhere from $500 to $1000 a month rent.

Carl.

153. Re: FS: 200AMP 12V Supplies: $40

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 01:18:47 UTC
From: John P Vassel <john@vassel.net>
Message-ID: <3c3a48ea$0$35614$2c3e98f8@news.voyager.net>
Source record: 47595
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

"Stuart Blake Tener" <stuart@misty.com> wrote in
news:a1ddjd$t9$1@news.misty.com:

> Fellow hams:
>
>
> Okay! Now that I got your attention, I bought for $40 a bunch of PC
> power supplies, and I am curious about how I can combine them into one
> supply!
>
> They have a 25amp 5V output on each one, and an 8amp 12V output on
> each
> one.
>
> I am curious to know what or how I can:
>
> (a) combine the 5V outputs from 3 supplies to yield me a combined
> 25amp
> 15V source (presuming three are powered up at once)?
>
> (b) take 3 8amp 12V outputs and merge them into a single 24amp 12V
> output
>
>
> I have PC supplies out the a$$, and wish to combine them to build a
> massive 200amp supply, any ideas how to do this? I long ago forgot my
> electronics theory with regard to power supplies, and I think you need
> diodes or something to keep the electricity from flowing from one
> supply to the other.
>
> Stuart
> Beverly Hills, CA
>
>
>
>

Gee, I was just looking to buy a 200amp ps.
Guess if you needed help, you'd have phrased the posting that way eh?

--
John Vassel
KC8SKE
RTFD Volunteer Firefighter

154. Fuel Pump EMI Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 02:06:04 UTC
From: "Richard F. Gillette P.E." <r.f.gillette@ieee.org>
Message-ID: <3C3A5307.FEFA3D64@ieee.org>
Source record: 47596

Anyone have a contact, reference, service bulletin or part number for fuel pump filtering on a Chevy?

ARRL web has a ford Part # and a Chevy 800 phone #. I am looking for a contact at Chevy, their service bulletin # or a part #.

I am buying a new Impala (factory order) and want to get it with the filter.

Thanks, Richard W9PE

155. Re: Passive LC filter design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 02:09:15 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3C3A54CB.696AD73F@visi.com>
Source record: 47497

Roy Lewallen wrote:
>
> A zero in the transfer function means that there's a frequency at which
> the response of the filter has zero transmission.

Hi Roy,
You answer to the original post was very enlightening.
Do I take it then that a pole in the transfer function mean that there
is a frequency at which the response of the filter has zero loss?

Thanks

Bob WB0POQ

156. Re: WWV-only rcvr?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 03:39:17 UTC
From: Michael Black <blackm00@gloria.cam.org>
Message-ID: <Pine.LNX.4.33.0201072230160.31232-100000@gloria.cam.org>
Source record: 47498

On Mon, 7 Jan 2002, Peter J. Bertini wrote:

> Mike,
>
> I thought MFJ made one. Also, I see a few commercial WWV
> receivers pop up on eBay from time to time.
>
> Pete
>

I don't know about MFJ, but Hamtronics, http://www.hamtronics.com
has a WWV receiver. I remember seeing a review in 73, and it actually
seemed quite fancy.

You used to see all kinds of dedicated WWV receivers described in
the ham magazines. Usually, they took the form of a converter ahead
of an AM BCB radio. A car radio has the advantage that it's shielded
and has an antenna jack for feeding a converter into. If one can't
find such a specific article, it's just a matter of finding a converter
schematic that covers the general range, and getting a crystal that
would converte the WWV frequency down to the IF.

Of course, people did build complete WWV receivers, but since they
all seemed to use 455KHz IF's, one might as well start with a broadcast
receiver. I've seen one or two that started with one, and moved it
to 2.5MHz, is WWV still on that frequency?, and then a converter to
get the other frequencies.

One design that I liked from Ham Radio, was a TRF design, with
a single-crystal filter after a stage of RF amplification, feeding
some more amplification and a diode detector. Considering the
availability of 10MHz crystals, I am tempted to try a ladder filter
on 10MHz, and then some stages of amplification.

Michael VE2BVW

> "Mike Andrews" <mikea@mikea.ath.cx> wrote in message
> news:FTi_7.3340$C54.626325613@newssvr15.news.prodigy.com...
> > Anyone got plans/partlists/schematics for something to pull
> > in _only_ 2.5, 5, 10, 15, and 20 MHz. -- maybe all five at
> > once, for frequency diversity? Or do I get to design and
> > build it myself? I followed a link to AADE.COM (Almost All
> > Digital Electronics) from the Google search results, but
> > came up dry.
> >
> > --
> > "I sense much NT in you. NT leads to Blue Screen, Blue Screen leads to

> downtime,
> > downtime leads to suffering. NT is the path to the Dark Side."
>
>
>

157. Re: WWV-only rcvr?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 04:08:40 UTC
From: "G. Skiffington" <skiffing@nbnet.nb.ca>
Message-ID: <3C3AA75D.153E@nbnet.nb.ca>
Source record: 47499

and just a note to you Mike, if its mainly a time signal on an accurate frequency that you're looking for, you can receive CHU, Ottawa on the following frequencies 3330, 7335, 14670 kHz (often better on the eastern seaboard, than WWV)....the 7335 freq is handy in that it's tunable in most ham-band only receivers.

Gord - VE1AJF

158. Re: M9755/9850

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 05:48:13 UTC
From: Bruce Lane <spammers@buzz.off>
Message-ID: <MPG.16a427f419c314d2989773@localhost>
Source record: 47500

In article <a1cocnebi1@mail.cn99.com>, salers@hamal.freemail.ne.jp says...

> Hi!
> Anyone the M9755 and M9850 VHF(UHF?) power transister's specs?

I don't know the specs, but the Motorola house numbers on those devices should expand out to 48-869755 and 48-869850 respectively (if my somewhat swiss-cheesed memory is still accurate from 7 years of working for Motorola's Comm Sector).

I hope that helps in your cross-referencing efforts.

> Thanks in advance
> 73! Xu
>
>
>

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to what I have now..." (Taki Kogoma)

159. Re: FRS repeater (construction or otherwise)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 07:50:30 UTC
From: "Andrew H." <and0@west.net>
Message-ID: <bxx_7.301$d4.7703@newsfeed.avtel.net>
Source record: 47501
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

Sorry for any confusion; this is basically what I have in mind:

I live on top of a hill which overlooks most of the town. I can get a good signal to and from someone down in the town, but actually being in the city greatly reduces the range (as one might expect). What I'd like to do is set up something at my house that acts like a satalite of sorts; any communications on one specific frequency (channel 12 or something like that on the FRS) would get rebroadcast. This would allow other people to take advantage of this if they so desired (by using the broadcast channel). I wouldn't want any kind of power increase; this is just to solve some LOS issues. :)

Again, I'm not trying to increase the range, I'm looking to create a reflector of sorts. (The same end result as having someone stay at my house and relay messages from one person in the city to the other). ;) Any ideas?

Andrew H.

"Andrew H." <and0@west.net> wrote in message
news:3i9_7.226$d4.6875@newsfeed.avtel.net...
> I'm looking for a repeater for FRS-band radios. Is one available? If
not,
> would it be possible to construct one? I'm not adverse to electronic
work,
> by the way. ;) Thanks for any information!
>
> Andrew H.
>
>
> (Sorry about cross-posting, but I wasn't sure which group to post to.)
>
>

160. Re: Passive LC filter design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 08:03:59 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C3AA7EF.2E4E758E@eznec.com>
Source record: 47502

It's been a long time since I dug into filter synthesis at this level, so I hope someone more up to date will jump in and set the record straight if I don't recall the details correctly.

A zero in the transfer function doesn't necessarily mean that the transfer function will go completely to zero at any (real) frequency. Similarly, a pole doesn't mean that the transfer function will become infinite. The relative amplitude response of a network at a given frequency is equal to the product of the vector distances from the point on the transfer function imaginary axis representing that frequency to all the zeros, divided by the product of the vector distances to all the poles from that same point on the imaginary axis(*). So the magnitude of the transfer function will go to zero at a particular frequency only if a zero lies on the imaginary axis at that frequency. If the zero is off the axis, the response will take a dip at or near the imaginary part of the zero's complex frequency, but won't go to zero. Similarly, the response would get infinite only if there were a pole on the imaginary axis. What I can't recall is whether an imaginary axis pole (actually, pole pair) can occur in a theoretically lossless network. If it could, the transfer function would become infinite at the frequency in question. If not, it can get arbitrarily close, resulting in an arbitrarily large transfer function response. In both theoretical and real filters, the (voltage or current) transfer function can, and frequently does, exceed unity at some frequencies. When source and load terminations are considered, though, conservation of energy always has to rule.

In the common lowpass and highpass filters I've seen which have transfer function zeros, the zeros are generally on the imaginary axis, resulting in a zero amplitude response at some frequencies. Allpass filters (ones with flat frequency but variable phase response), however, generally have complex zeros (that is, zeros which aren't on the real or imaginary axis). Other specialized types, such as equalizing filters, also often have complex zeros.

Pure theoretical LC filters have no loss anyway, so the location of poles and zeros has nothing to do with determining the filter loss. Attenuation is due purely to "mismatch loss", that is to say impedance mismatch. When a filter does have loss due to resistive components, the locations of the poles are limited to some distance from the imaginary axis depending on the loss. It's possible that by "loss" you meant "attenuation" (or "mismatch loss"). In non-matched filters, the output voltage or current can exceed the input voltage by a large factor, even when the poles are complex, as I mentioned above.

As I said before, filter design is a discipline in itself.

Roy Lewallen, W7EL

(*) If there are no zeros, use the value 1 in place of the product of zeros. The phase response is the sum of the angles of the vectors to all the zeros minus the sum of angles of the vectors to all the poles. It's easy to see from this that if poles or zeros are close to the imaginary axis (i.e., have high Q), the amplitude response changes rapidly, but so does the phase. A zero on the axis causes very rapid amplitude and phase changes with frequency.

Bob Liesenfeld wrote:
>
> Roy Lewallen wrote:
> >
> > A zero in the transfer function means that there's a frequency at which
> > the response of the filter has zero transmission.
>
> Hi Roy,
> You answer to the original post was very enlightening.
> Do I take it then that a pole in the transfer function mean that there
> is a frequency at which the response of the filter has zero loss?
>
> Thanks
>
> Bob WB0POQ

161. Re: FRS repeater (construction or otherwise)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 13:00:48 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <u3lrcpr29mti76@corp.supernews.com>
Source record: 47503
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

First its not legal to set up a repeater on FRS. From a technical standpoint It will be rather difficult to do using standard FRS equipment. One problem is that the repeater will be receiving and transmitting simultaniously in the same band. The closer the two frequencies the more difficult it will be to keep the transmitter from desensing the receiver. Amateur repeaters generally use a 600 Khz separation and then need special tuned cavities to make it work (although they are usually running a lot more transmit power than FRS). Another issue is that your user's FRS radios must be capable of transmitting on one frequency and receiving on the other. I've not seen an FRS radio with this capability.

Another option is a "simplex repeater". You transmit a message, the repeater records it. When you unkey, the repeater echos your message on the same frequency. It's slow, but could use standard FRS radios.

162. iLINK boards + kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 13:41:04 UTC
From: Duffer <hduff@rogers.com>
Message-ID: <3C3AF6F0.6A258EB4@ica.net>
Source record: 47504
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

If anyone is interested in setting up an iLINK
link radio or repeater, check out:
www.iLINKca.com

They have boards, kits and completed units
for an iLINK interface.
You can pay by PayPal or order by mail.

163. Which Came First?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 13:49:34 UTC
From: Al Lorona <al_lorona@agilent.com>
Message-ID: <3C3AF8ED.38B8578E@agilent.com>
Source record: 47544
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I'm just curious: is it correct to assume that the current AM broadcast band is really the best choice of frequency for the desired characteristics for that service? In other words, was 540-1600 kHz (before expansion to 'AM wide' a few years ago) chosen first, and then the stations placed there? Or did the stations begin operation in that frequency band and just happened to choose a good ground wave frequency band for local broadcasting?

I've been reading some of the history of KDKA, which of course was the first commercial broadcast station in Pittsburgh in 1920 (on 360 meters, according to the original FCC license), and it seems that the Westinghouse engineers knew that starting around 1500 kHz ground losses increased, making those frequencies less useful for local reception. (They apparently didn't know about sky wave propagation). But aside from that, is there anything magical about the current broadcast band that makes it the best choice?

Thanks,

Al W6LX

164. Re: 200AMP 12V Supplies: $40

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 14:02:24 UTC
From: Brenda Ann <brandad@kornet.net>
Message-ID: <a1eu5h$9gg$1@hiline.shinbiro.com>
Source record: 47505
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

You are quite correct about needing to isolate the supplies outputs from one another. This is especially important with switchers. Another problem or two that you are likely to have, depending on the design of any particular supply, is that a) some supplies don't even put out a voltage unless there is a load applied when they first power up and b) most computer power supplies put out 12V plus or minus 1%.. and are not adjustable, so you are already under voltage for your 13.8V rigs.. and then you put in the isolation diodes and drop it to ~11.4V. Seriesing the 5V supplies for 15V would be trickier still because of the differing load regulations for the different supplies..

"Stuart Blake Tener" <stuart@misty.com> wrote in message
news:a1ddjd$t9$1@news.misty.com...
> Fellow hams:
>
>
>
> (b) take 3 8amp 12V outputs and merge them into a single 24amp 12V
> output
>
>
> I have PC supplies out the a$$, and wish to combine them to build a
> massive 200amp supply, any ideas how to do this? I long ago forgot my
> electronics theory with regard to power supplies, and I think you need
> diodes or something to keep the electricity from flowing from one supply
to
> the other.
>
> Stuart
> Beverly Hills, CA
>
>
>

165. DIY Decals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 14:20:22 UTC
From: Steve Robertson <ke4oh@yahoo.com>
Message-ID: <3C3B0026.1CA77FE0@yahoo.com>
Source record: 47506

I just saw a product in the office supply store that I've never seen before - Inkjet decal sheets. They are made by Avery (maybe others make something similar). I was in a hurry, so I didn't look the package over very closely, but this product might have promise for DIY chassis markings.

I've had very good results using "water slide" decal sheets from the hobby store, but you have to use a color copier to put the image on them - inkjet directly on them just doesn't work.

I couldn't tell if they are adheasive backed or water slide, but I'm going to get some soon and try them out. Have any of you tried these?

Steve Robertson

166. Re: Kit companies?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 15:00:58 UTC
From: KC8PMX <kc8pmx@tm.net>
Message-ID: <KQD_7.142$xu.21033@newshog.newsread.com>
Source record: 47507

Hey, thanks for the links. Will check those out. Wanna start with some of the pre-made kits, and then start experimenting later on as my confidence level increases.

Thanks!
Ryan

"xpyttl" <xpyttl_nospam@earthling.net> wrote in message news:u3jrrjifu98o40@corp.supernews.com...
> Hey - Ryan
>
> The QRP Amateur Radio Club International:
>
> http://www.qrparci.org
>
> has a fairly extensive list of links for kit suppliers. Unfortunately, many
> of the more fun kits (unusual, low priced, etc.) tend to be produced by
> clubs (NorCal, NoGa, NJQRP, Flying Pigs) and only for a short time. If you
> aren't in touch with what's happening when it happens, you can miss the
> opportunity.
>
> The QRP-L reflector does give you a chance to keep up with a lot of what's
> going on, and is a good way to get feedback on QRP kits. But it is a very
> high-volume list, so you better know how to work your inbox rules!
> Subscription information and archives at:
>
> http://qrp.lehigh.edu/lists/qrp-l/
>
> A somewhat less intense (and consequently less useful) forum is the QRP-F:
>
> (http://www.e-discounter.net/qrparci/).
>
> Ten-Tec has some VHF kits, but the prices are higher than already built
> commercial rigs with more features. VHF kits seem to be few and far between
>
> ..
>
> "KC8PMX" <kc8pmx@tm.net> wrote in message
> news:Mei_7.16$xu.2005@newshog.newsread.com...
> > Does anyone have the URL's for any kit building manufacturers? I have the
> > one for Ramsey but am looking for others. I am a newbie when it comes

to
> > this, and want to try learning a little bit more through the making of
> some
> > kits.
> >
> > Thanks,
> >
> > Ryan, KC8PMX
> >
> >
> >
>
>

167. Re: FS: 200AMP 12V Supplies: $40

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 15:56:26 UTC
From: cj <cj_johansson@hp.com>
Message-ID: <3C3B16AA.7225444E@hp.com>
Source record: 47509
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

Stuart Blake Tener wrote:
<SNIP>

Hmm, most people assume FS means For Sale....

Well, now for the answer you're not wanting to hear, it'll be nearly impossible to combine them into a massive output supply. The biggest problem you run into is how to get the voltage regulation to synchronize between them all (none will be at the same voltage, so some will carry more of the load than others, then those will over-current and shutdown or fry, allowing the next ones to do the same shortly thereafter). This is a big problem for high reliability systems with multiple supplies, they use all sorts of fancy current sharing schemes.

First off, you need to isolate all the outputs from each other with diodes so the lower voltage ones don't suck current from the higher ones trying to get the voltage down to what they think it should be (the higher ones will boost their output to compensate for the "load"). But, you still have the problem with the higher voltage ones taking tall the load. Without serious modifications to the voltage regulation circuits, it just won't work...

-cj

168. Re: at what point will a germanium detector 'detect'?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 15:56:31 UTC
From: "Richard F. Gillette P.E." <r.f.gillette@ieee.org>
Message-ID: <3C3B15A9.B2297DB8@ieee.org>
Source record: 47508

The ear has big problems understanding voice with zero crossing clipping/distortion, but it has little problems with peak clipping, (some audio processing/peek clipping will improve the range of a ham transmitter.) Most people can understand voice with 20 db peak clipping, but 3 db of zero crossing clipping eliminates all understanding.
The diode is a good AM speech detector as it it matches the ear's capability. If the application is not speech, then it may or may not be good.

Biggles wrote:

> "Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message news:<3C36A334.43427DA7@clifto.com>...
> > Biggles wrote:
> > > I was able to get hold of a paper on the internet which models (theory
> > > and practice) the distortion generated by a diode detector.
> >
> > Where did you find it?
>
> Found it on:
>
> http://www.thebizlink.com/am/tech/htm/tutor.htm
>
> Hope this helps!

169. Re: FRS repeater (construction or otherwise)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 16:16:17 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <5JI_7.16033$qL3.2821147@news6-win.server.ntlworld.com>
Source record: 47524
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

> I live on top of a hill which overlooks most of the town. I can get a
good
> signal to and from someone down in the town, but actually being in the
city
> greatly reduces the range (as one might expect). What I'd like to do is
set
> up something at my house that acts like a satalite of sorts; any
> communications on one specific frequency (channel 12 or something like
that
> on the FRS) would get rebroadcast. This would allow other people to take
> advantage of this if they so desired (by using the broadcast channel). I
> wouldn't want any kind of power increase; this is just to solve some LOS
> issues. :)
>
> Again, I'm not trying to increase the range, I'm looking to create a
> reflector of sorts. (The same end result as having someone stay at my
house
> and relay messages from one person in the city to the other). ;) Any
> ideas?
=========
Andrew , I very much doubt your 'repeater' would be legal. I do know that
FRS radios have a fixed antenna and are type approved.
This means home-brewing anything for use on FRS frequencies (around 451 MHz
?) is highly likely illegal.
Here in the UK we have a similar service (Personal Mobile Radio)PMR 446 e.g.
8 channels 12.5kHz spaced commencing at 446.0025 MHz .Same recipe : type
approved ,fixed rubber duck antenna ,no home brew mods permitted.
(the 70cms amateur band in ITU region 1 is only from 430 - 440 MHz).

Frank gm0csz.kn6wh@ntlworld.com

170. Soft start for tube amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 16:18:41 UTC
From: John Strupat <john.strupat@sympatico.ca>
Message-ID: <x_E_7.9558$qC1.1689220@news20.bellglobal.com>
Source record: 47510

Hi,

I'm interested in adding a circuit to a single 3-500 amp that will gradually allow more current to the plate transformer to avoid the impressive current spike at power ON.

I've seen circuitry with time delay relays that short out a series resistor in the AC line after 10-20 sec. but wonder about using an NTC resistor instead?

Am I off track in thinking that a series R that started at say 10 ohms and then went to about 0.5 ohm when hot would do the trick?

Thanks,

John VE3PCN

171. Parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 16:24:01 UTC
From: Johnathon and Courtney Chihonik <chihonjcnospam@mb.sympatico.ca>
Message-ID: <3C3B1D21.FEB04863@mb.sympatico.ca>
Source record: 47511

Hey there, this is for any of the Canadians who are watching this group. I'm just getting into amateur radio and wondering where we (as Canadians) can order components from. I have a digikey catalog, but cant find some of the more RF type stuff, like a NE612 osc/mixer. Does anyone know of a good place to order these?

TIA
Johnathon Chihonik

172. Re: Soft start for tube amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 16:36:09 UTC
From: "Harold E. Johnson" <W4ZCB@Home.com>
Message-ID: <ZdF_7.34798$LQ1.10781308@news2.nash1.tn.home.com>
Source record: 47512

>
> Am I off track in thinking that a series R that started at say 10 ohms and
> then went to about 0.5 ohm when hot would do the trick?

Sure. Works fine. Until the first time you have a momentary power outage and
it comes right back on within a few seconds.

W4ZCB

173. Re: WWV-only rcvr?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 17:13:22 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrna3ma5j.i9i.QSB@animas.frontier.net>
Source record: 47513

```
On Tue, 08 Jan 2002 04:08:40 GMT, G. Skiffington scribbled:
> and just a note to you Mike, if its mainly a time signal on an accurate
> frequency that you're looking for, you can receive CHU, Ottawa on the
> following frequencies 3330, 7335, 14670 kHz (often better on the
> eastern seaboard, than WWV)....the 7335 freq is handy in that it's
> tunable in most ham-band only receivers.

IIRC, in the Olde Days CHU was on 7,333.3333333333 kcs.
Is my memory hazy?
If not, when and why did they change?

73 es hny
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK
```

174. Re: at what point will a germanium detector 'detect'?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 17:17:49 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a1fd2v$q7ov4$1@ID-124126.news.dfncis.de>
Source record: 47516

"3dB of zero-crossing clipping" is quite meaningless. It sounds very knowledgable but could you be more precise please? Preferably without mentioning dBs.
--
Reg.
==========

Richard F. Gillette P.E. <r.f.gillette@ieee.org> wrote in message news:3C3B15A9.B2297DB8@ieee.org...
> The ear has big problems understanding voice with zero crossing clipping/distortion,
> but it has little problems with peak clipping, (some audio processing/peek clipping will improve the
> range of a ham transmitter.) Most people can understand voice with 20 db peak clipping, but 3 db of
> zero crossing clipping eliminates all understanding.
> The diode is a good AM speech detector as it it matches the ear's capability. If the application is
> not speech, then it may or may not be good.
>
> Biggles wrote:
>
> > "Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message news:<3C36A334.43427DA7@clifto.com>...
> > > Biggles wrote:
> > > > I was able to get hold of a paper on the internet which models (theory
> > > > and practice) the distortion generated by a diode detector.
> > >
> > > Where did you find it?
> >
> > Found it on:
> >
> > http://www.thebizlink.com/am/tech/htm/tutor.htm
> >
> > Hope this helps!
>

175. Re: DIY Decals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 17:20:39 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a1fd33$q7ov4$2@ID-124126.news.dfncis.de>
Source record: 47517

>, but I'm going to get some soon and try them out.
> Have any of you tried these?
==========
No. You tell us. ;o)

176. Re: FRS repeater (construction or otherwise)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 17:23:32 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrna3maol.i9i.QSB@animas.frontier.net>
Source record: 47514
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Mon, 7 Jan 2002 23:50:30 -0800, Andrew H. scribbled:
> Sorry for any confusion; this is basically what I have in mind:
>
> I live on top of a hill which overlooks most of the town. I can get a good
> signal to and from someone down in the town, but actually being in the city
> greatly reduces the range (as one might expect). What I'd like to do is set
> up something at my house that acts like a satalite of sorts; any
> communications on one specific frequency (channel 12 or something like that
> on the FRS) would get rebroadcast. This would allow other people to take
> advantage of this if they so desired (by using the broadcast channel). I
> wouldn't want any kind of power increase; this is just to solve some LOS
> issues. :)
>
> Again, I'm not trying to increase the range, I'm looking to create a
> reflector of sorts. (The same end result as having someone stay at my house
> and relay messages from one person in the city to the other). ;) Any
> ideas?

Well, then.... If your intended, 'extended' operation is in one
general direction: Try placing the FRS which you use at home in
some sort of a corner or parabolic reflector -- pointed, of course,
at the town. Using shielded cables run mic input and audio output
lines (and a suitable pwr line) from the now fixed-placed FRS radio
(mounted in the reflector) into the house. Mount it out-of-doors
with no line-of-sight obstructions.

It's an 'experiment' I've often thought to try.

"Weatherproofing, construction, focus, cabling, and powering are
left as an exercise for the student."

Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

177. Re: Soft start for tube amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 17:30:21 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a1fd34$q7ov4$3@ID-124126.news.dfncis.de>
Source record: 47518

The surge lasts only for the first cycle of the AC supply, about 15 or 20
milliseconds. You probably don't need a resistor. A very small inductance
may be all that's necessary.

How do you know you need anything at all ? If it works don't fix it.

Reg.
==========

John Strupat <john.strupat@sympatico.ca> wrote in message
news:x_E_7.9558$qC1.1689220@news20.bellglobal.com...
> Hi,
>
> I'm interested in adding a circuit to a single 3-500 amp that will
gradually
> allow more current to the plate transformer to avoid the impressive
current
> spike at power ON.
>
> I've seen circuitry with time delay relays that short out a series
resistor
> in the AC line after 10-20 sec. but wonder about using an NTC resistor
> instead?
>
> Am I off track in thinking that a series R that started at say 10 ohms and
> then went to about 0.5 ohm when hot would do the trick?
>
> Thanks,
>
> John VE3PCN
>
>

178. Re: Passive LC filter design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 17:50:22 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C3B315D.17A23AF4@ieee.org>
Source record: 47515

Roy,

Thanks for the excellent replies.

Clyde

Roy Lewallen wrote:

> It's been a long time since I dug into filter synthesis at this level,
> so I hope someone more up to date will jump in and set the record
> straight if I don't recall the details correctly.
>
> A zero in the transfer function doesn't necessarily mean that the
> transfer function will go completely to zero at any (real) frequency.
> Similarly, a pole doesn't mean that the transfer function will become
> infinite. The relative amplitude response of a network at a given
> frequency is equal to the product of the vector distances from the point
> on the transfer function imaginary axis representing that frequency to
> all the zeros, divided by the product of the vector distances to all the
> poles from that same point on the imaginary axis(*). So the magnitude of
> the transfer function will go to zero at a particular frequency only if
> a zero lies on the imaginary axis at that frequency. If the zero is off
> the axis, the response will take a dip at or near the imaginary part of
> the zero's complex frequency, but won't go to zero. Similarly, the
> response would get infinite only if there were a pole on the imaginary
> axis. What I can't recall is whether an imaginary axis pole (actually,
> pole pair) can occur in a theoretically lossless network. If it could,
> the transfer function would become infinite at the frequency in
> question. If not, it can get arbitrarily close, resulting in an
> arbitrarily large transfer function response. In both theoretical and
> real filters, the (voltage or current) transfer function can, and
> frequently does, exceed unity at some frequencies. When source and load
> terminations are considered, though, conservation of energy always has
> to rule.
>
> In the common lowpass and highpass filters I've seen which have transfer
> function zeros, the zeros are generally on the imaginary axis, resulting
> in a zero amplitude response at some frequencies. Allpass filters (ones
> with flat frequency but variable phase response), however, generally
> have complex zeros (that is, zeros which aren't on the real or imaginary
> axis). Other specialized types, such as equalizing filters, also often
> have complex zeros.
>
> Pure theoretical LC filters have no loss anyway, so the location of
> poles and zeros has nothing to do with determining the filter loss.

> Attenuation is due purely to "mismatch loss", that is to say impedance
> mismatch. When a filter does have loss due to resistive components, the
> locations of the poles are limited to some distance from the imaginary
> axis depending on the loss. It's possible that by "loss" you meant
> "attenuation" (or "mismatch loss"). In non-matched filters, the output
> voltage or current can exceed the input voltage by a large factor, even
> when the poles are complex, as I mentioned above.
>
> As I said before, filter design is a discipline in itself.
>
> Roy Lewallen, W7EL
>
> (*) If there are no zeros, use the value 1 in place of the product of
> zeros. The phase response is the sum of the angles of the vectors to all
> the zeros minus the sum of angles of the vectors to all the poles. It's
> easy to see from this that if poles or zeros are close to the imaginary
> axis (i.e., have high Q), the amplitude response changes rapidly, but so
> does the phase. A zero on the axis causes very rapid amplitude and phase
> changes with frequency.
>
> Bob Liesenfeld wrote:
> >
> > Roy Lewallen wrote:
> > >
> > > A zero in the transfer function means that there's a frequency at which
> > > the response of the filter has zero transmission.
> >
> > Hi Roy,
> > You answer to the original post was very enlightening.
> > Do I take it then that a pole in the transfer function mean that there
> > is a frequency at which the response of the filter has zero loss?
> >
> > Thanks
> >
> > Bob WB0POQ

179. Re: WWV-only rcvr?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 18:28:26 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <pfem3usb6e72eod5o653alii8ier7b8j03@4ax.com>
Source record: 47519

On 08 Jan 2002 17:13:22 GMT, Allodoxaphobia <QSB@QRM-QRN.net> wrote:

>IIRC, in the Olde Days CHU was on 7,333.3333333333 kcs.
>Is my memory hazy?
>If not, when and why did they change?

If they changed, it must have been at least 25 years ago --because I
remember CHU's frequency being 7335 kHz from my novice days back then.

73,

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

180. Re: WWV-only rcvr?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 19:43:55 UTC
From: Michael Black <blackm00@cam.org>
Message-ID: <Pine.LNX.4.20.0201081431001.19322-100000@darkstar.example.net>
Source record: 47520

On Tue, 8 Jan 2002, Jake Brodsky wrote:

> On 08 Jan 2002 17:13:22 GMT, Allodoxaphobia <QSB@QRM-QRN.net> wrote:
>
> >IIRC, in the Olde Days CHU was on 7,333.3333333333 kcs.
> >Is my memory hazy?
> >If not, when and why did they change?
>
> If they changed, it must have been at least 25 years ago --because I
> remember CHU's frequency being 7335 kHz from my novice days back then.
>
> 73,
>
>
> Jake Brodsky, AB3A mailto:frussle@erols.com
> "Beware of the massive impossible!"
>

I could have sworn that CHU was on 7,333.3333333333 because a few
years back I saw a reference to 7335KHz and thought that couldn't
be right. Yet, checking the 1972 ARRL Handbook, I was licensed
that year, it is indeed 7335KHz.

So I suspect there is some reason, an error at one point or just
an assumption, that CHU would have that repeating decimal. Face it,
the CHU frequencies are odd-ball compared to WWV/WWVH, so there
is less reason to remember the exact frequency in the first place.
And the repeating decimal does seem to make more sense, since multiplying
it by three gives you an even MHz, 22Mhz to be exact. Except, there
is no CHU frequency there, so it can't be explained by one standard
for all the frequencies.

There seems no immediate rhyme or reason for the frequencies used
by CHU. I know the range they are in, but I think I'd always have
to look them up to give the exact frequency. The only thing
that does stand out is that they are all close to a ham band, within
120Khz, though that seems an unlikely reason for the choices.

Michael VE2BVW

181. Re: Soft start for tube amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 19:46:27 UTC
From: Sparks W4EAS <sparksw4eas@mindspring.com>
Message-ID: <3C3B4C93.1A81@mindspring.com>
Source record: 47521

Most Commercial and Ham amplifiers/transmitters of good design now use soft start circuits. A resistor is most commonly used. The transformer primary is ALREADY inductive..... Why add more? 73 Sparks W4EAS

182. Re: at what point will a germanium detector 'detect'?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 20:02:46 UTC
From: "Richard F. Gillette P.E." <r.f.gillette@ieee.org>
Message-ID: <3C3B4F68.DE6D22A2@ieee.org>
Source record: 47522

Draw a sine wave, say 4 inches peak to peak. For peak clipping just clip the top and bottom so the resulting almost square wave is 0.4 inches peak to peak. For zero crossing clipping fold the paper so that the part of the wave near zero is eliminated and the peak to peak height is about 2.8 inches. Now change the sine wave above (a pure tone) to voice wave form. Reducing the peak to peak amplitude from 4 to .4 by peak clipping and and we still understand, but reducing it from 4 to 2.8 by zero crossing clipping and we will not understand.

The point I tried to make was, the diode detector has little distortion at low levels (near zero crossings) it has increasing distortion as the level increases. We can understand diode detected AM without a problem as our ears care about zero crossing distortion much more than distortion at the peak of a wave form. When it is important to have low distortion to understand voice the diode detector has low distortion, when the diode distorts our ears do not care.

Reg Edwards wrote:

> "3dB of zero-crossing clipping" is quite meaningless. It sounds very
> knowledgable but could you be more precise please? Preferably without
> mentioning dBs.
> --
> Reg.
> ============================
>
> Richard F. Gillette P.E. <r.f.gillette@ieee.org> wrote in message
> news:3C3B15A9.B2297DB8@ieee.org...
> > The ear has big problems understanding voice with zero crossing
> clipping/distortion,
> > but it has little problems with peak clipping, (some audio processing/peek
> clipping will improve the
> > range of a ham transmitter.) Most people can understand voice with 20 db
> peak clipping, but 3 db of
> > zero crossing clipping eliminates all understanding.
> > The diode is a good AM speech detector as it it matches the ear's
> capability. If the application is
> > not speech, then it may or may not be good.
> >
> > Biggles wrote:
> >
> > > "Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message
> news:<3C36A334.43427DA7@clifto.com>...
> > > > Biggles wrote:
> > > > > I was able to get hold of a paper on the internet which models
> (theory
> > > > > and practice) the distortion generated by a diode detector.

> > > >
> > > > Where did you find it?
> > >
> > > Found it on:
> > >
> > > http://www.thebizlink.com/am/tech/htm/tutor.htm
> > >
> > > Hope this helps!
> >

183. Re: WWV-only rcvr?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 20:20:41 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrna3ml4q.rj2.QSB@animas.frontier.net>
Source record: 47523

On Tue, 8 Jan 2002 14:43:55 -0500, Michael Black scribbled:
>
> On Tue, 8 Jan 2002, Jake Brodsky wrote:
>
>> On 08 Jan 2002 17:13:22 GMT, Allodoxaphobia <QSB@QRM-QRN.net> wrote:
>>
>> >IIRC, in the Olde Days CHU was on 7,333.3333333333 kcs.
>> >Is my memory hazy?
>> >If not, when and why did they change?
>>
>> If they changed, it must have been at least 25 years ago --because I
>> remember CHU's frequency being 7335 kHz from my novice days back then.
>>
> I could have sworn that CHU was on 7,333.3333333333 because a few
> years back I saw a reference to 7335KHz and thought that couldn't
> be right. Yet, checking the 1972 ARRL Handbook, I was licensed
> that year, it is indeed 7335KHz.

Yes -- I'm rememberin' from back in the early 1960's. I was stationed
in Germany and oftentimes CHU was easier to copy than WWV.
My memory bank seems to remember it as 7,333.3333333333333....

73
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

184. Re: FRS repeater (construction or otherwise)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 21:00:00 UTC
From: "D. Stussy" <kd6lvw@bde-arc.ampr.org>
Message-ID: <Pine.LNX.4.10.10201082059390.17632-100000@exp.bde-arc.ampr.org>
Source record: 47525
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

We understood you the first time. It's not permitted in FRS.

On Mon, 7 Jan 2002, Andrew H. wrote:
>Sorry for any confusion; this is basically what I have in mind:
>
>I live on top of a hill which overlooks most of the town. I can get a good
>signal to and from someone down in the town, but actually being in the city
>greatly reduces the range (as one might expect). What I'd like to do is set
>up something at my house that acts like a satalite of sorts; any
>communications on one specific frequency (channel 12 or something like that
>on the FRS) would get rebroadcast. This would allow other people to take
>advantage of this if they so desired (by using the broadcast channel). I
>wouldn't want any kind of power increase; this is just to solve some LOS
>issues. :)
>
>Again, I'm not trying to increase the range, I'm looking to create a
>reflector of sorts. (The same end result as having someone stay at my house
>and relay messages from one person in the city to the other). ;) Any
>ideas?
>
>"Andrew H." <and0@west.net> wrote:
>> I'm looking for a repeater for FRS-band radios. Is one available? If not,
>> would it be possible to construct one? I'm not adverse to electronic work,
>> by the way. ;) Thanks for any information!
>>
>> (Sorry about cross-posting, but I wasn't sure which group to post to.)

185. Re: Soft start for tube amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 21:02:59 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.com>
Message-ID: <3WqrMBLD61O8EAeT@ifwtech.com>
Source record: 47526

Reg Edwards wrote:
>The surge lasts only for the first cycle of the AC supply, about 15 or 20
>milliseconds. You probably don't need a resistor. A very small inductance
>may be all that's necessary.
>
>How do you know you need anything at all ? If it works don't fix it.

He knows from the agonized "thump" that comes from the mains transformer at switch-on, especially if he happens to hit it at the wrong part of the mains cycle. He knows from the arc he can hear inside the mains switch, and wonders how long that switch will last. He guesses that equally unpleasant things are happening to the B+ rectifier diodes and the stack of electrolytics. He may also have heard of the tube manufacturer's recommendation to avoid forcing a large current into the cold, low-resistance filament of a 3-500Z.

Apart from that, it doesn't need fixing at all.

In a power supply of this size, it takes several mains cycles for the capacitors to charge up through the series resistances of the transformer and the rectifiers... but certainly not as long as 10-20 seconds.

There are various circuits around for a step-start which places a resistor in series with the mains for about 1 second, and then operates a relay to short it out. (The objection to the NTC resistor is that it leaves a residual resistance in circuit, which still depends on the current demand. Because the current demand for an SSB/CW power amplifier varies widely, the NTC resistor will affect the regulation of all the different supply voltages drawn from that transformer. Also the resistor needs to run very hot.)

If the mains transformer provides all the operating voltages - B+, filament and rectified DC for relays etc - then a step-start is very easy. The DC relay voltage will not rise to its correct value (usually 12-24V) until the B+ electrolytics have also been fully charged, so you simply connect the step-start relay across the existing relay supply. This provides a suitable delay, which can be altered by changing the value of the resistor(s) in series with the mains. There is a schematic at http://www.vcnet.com/measures/

If the filament and relay voltages are supplied by a separate much smaller transformer, that step-start idea won't work, so you'd have to use one of the other circuits.

>John Strupat <john.strupat@sympatico.ca> wrote in message
>news:x_E_7.9558$qC1.1689220@news20.bellglobal.com...
>> Hi,
>>
>> I'm interested in adding a circuit to a single 3-500 amp that will
>gradually
>> allow more current to the plate transformer to avoid the impressive
>current
>> spike at power ON.
>>
>> I've seen circuitry with time delay relays that short out a series
>resistor
>> in the AC line after 10-20 sec. but wonder about using an NTC resistor
>> instead?
>>
--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.com/g3sek

186. Re: Soft start for tube amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 21:12:08 UTC
From: n7ws@yahoo.com
Message-ID: <3c3b6025.23393166@news.triconet.org>
Source record: 47527

On Tue, 08 Jan 2002 16:36:09 GMT, "Harold E. Johnson" <W4ZCB@Home.com> wrote:

|
|
|>
|> Am I off track in thinking that a series R that started at say 10 ohms and
|> then went to about 0.5 ohm when hot would do the trick?
|
|Sure. Works fine. Until the first time you have a momentary power outage and
|it comes right back on within a few seconds.

This is a good point. One trick to overcome the cool-down problem is a relay to short out the thermistor after the surge. But if you do this, you don't need the thermistor, an ordinary resistor will do <g>.

Good info at:

http://www.ametherm.com/Inrush_Current/inrush_current_faq.html

N7WS

187. Re: Soft start for tube amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 21:17:02 UTC
From: n7ws@yahoo.com
Message-ID: <3c3b6173.23727785@news.triconet.org>
Source record: 47528

On Tue, 8 Jan 2002 17:30:21 -0000, "Reg Edwards" <g4fgq.regp@btinternet.com>
wrote:

|The surge lasts only for the first cycle of the AC supply, about 15 or 20
|milliseconds. You probably don't need a resistor. A very small inductance
|may be all that's necessary.

Maybe, maybe not. For a free calculator that might help decide go to:

http://www.duncanamps.com/software.html

and download the PSU designer.

Wes N7WS

188. Re: Soft start for tube amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 21:41:15 UTC
From: Martin John Hallsworth <Martin@NOSPAMg1gyc.demon.co.uk>
Message-ID: <1010526057.29638.0.nnrp-10.9e98acde@news.demon.co.uk>
Source record: 47529

Reg Edwards wrote in message ...
>The surge lasts only for the first cycle of the AC supply, about 15 or 20
>milliseconds. You probably don't need a resistor. A very small inductance
>may be all that's necessary.

>
>How do you know you need anything at all ? If it works don't fix it.
>---
>Reg.

THUNG !!

189. Re: Soft start for tube amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 21:47:23 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <sWe%7.6200$1s6.1234186@news6-win.server.ntlworld.com>
Source record: 47493

"Harold E. Johnson" <W4ZCB@Home.com> wrote in message
news:ZdF_7.34798$LQ1.10781308@news2.nash1.tn.home.com...
>
>
> >
> > Sure. Works fine. Until the first time you have a momentary power outage
and
> it comes right back on within a few seconds.
=======
Unless ,of course ,you use a latching relay /push button in the 117 or
234V -AC Power supply , which I thought is normal for any power amp. A power
outage should result in an AC trip requiring a manual reset, a normal and
essential safety procedure for HV equipment.

Frank gm0csz.kn6wh@ntlworld.com

190. Re: FRS repeater (construction or otherwise)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 22:16:33 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrna3mrtl.26k.QSB@animas.frontier.net>
Source record: 47530
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Tue, 08 Jan 2002 01:14:17 GMT, Carl scribbled:
>
> GMRS and FRS share 7 frequencies. No repeater operations are allowed on
> those 7 frequencies.

Which 7 would these be?
I'd like to know vis-a-vis the QRM I _might_ see with my FRS.

73
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

191. Re: M9755/9850

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 22:36:48 UTC
From: "Peter J. Bertini" <commquart@home.com>
Message-ID: <4wK_7.106631$Y6.10435048@news1.rdc1.ct.home.com>
Source record: 47531

RF Parts crosses some of the Motorola transistors.

Pete

"Bruce Lane" <spammers@buzz.off> wrote in message
news:MPG.16a427f419c314d2989773@localhost...
> In article <a1cocnebi1@mail.cn99.com>, salers@hamal.freemail.ne.jp
> says...
>
> > Hi!
> > Anyone the M9755 and M9850 VHF(UHF?) power transister's specs?
>
> I don't know the specs, but the Motorola house numbers on those
> devices should expand out to 48-869755 and 48-869850 respectively (if my
> somewhat swiss-cheesed memory is still accurate from 7 years of working
> for Motorola's Comm Sector).
>
> I hope that helps in your cross-referencing efforts.
>
> > Thanks in advance
> > 73! Xu
> >
> >
> >
>
> --
> Bruce Lane, Owner and Head Hardware Heavy,
> Blue Feather Technologies -- http://www.bluefeathertech.com
> Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
> kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
> "I'll get a life when someone demonstrates to me it would be superior to
> what I have now..." (Taki Kogoma)

192. Re: Soft start for tube amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 23:05:41 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C3B7B45.4A2ED01@eznec.com>
Source record: 47532

The surge might have a number of causes. If the rig is turned off at an input voltage peak, the transformer iron can be left fully magnetized in one direction. If the voltage happens to be at the other maximum the next time it's turned on, core saturation can occur for the first cycle. This is probably the cause if you see a surge that's sometimes worse than others, and one that lasts only a cycle or two. A capacitive input power supply filter can draw a lot of current for the first few cycles as the capacitors charge up, another cause of a surge. There's another surge when filaments are turned on due to their low resistance when cold. I believe the original poster was concerned with a surge only when the high voltage was applied, so it wouldn't be the filaments in this case.

Roy Lewallen, W7EL

Wes Stewart wrote:
>
> On Tue, 8 Jan 2002 17:30:21 -0000, "Reg Edwards" <g4fgq.regp@btinternet.com>
> wrote:
>
> |The surge lasts only for the first cycle of the AC supply, about 15 or 20
> |milliseconds. You probably don't need a resistor. A very small inductance
> |may be all that's necessary.
>
> Maybe, maybe not. For a free calculator that might help decide go to:
>
> http://www.duncanamps.com/software.html
>
> and download the PSU designer.
>
> Wes N7WS

193. Re: CHU frequencies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 23:06:24 UTC
From: "Peter J. Bertini" <commquart@home.com>
Message-ID: <QXK_7.106633$Y6.10435381@news1.rdc1.ct.home.com>
Source record: 47533

From the websites, and all agree...

Three frequencies are used: 3330, 7335, and 14 670 kHz. The transmission mode, upper single sideband with carrier re-inserted, provides time signal service without requiring a special SSB radio, and also provides three standard frequencies. The frequencies are derived from one of a trio of closely synchronized atomic clocks located at the transmitter site. Three clocks are employed to permit majority logic checking. CHU time signals are also derived from these clocks. The clocks at the CHU transmitter site, about 20 km from NRC's time laboratory, are compared daily with the NRC primary cesium clocks.

"Allodoxaphobia" <QSB@QRM-QRN.net> wrote in message
news:slrna3ml4q.rj2.QSB@animas.frontier.net...
> On Tue, 8 Jan 2002 14:43:55 -0500, Michael Black scribbled:
> >
> > On Tue, 8 Jan 2002, Jake Brodsky wrote:
> >
> >> On 08 Jan 2002 17:13:22 GMT, Allodoxaphobia <QSB@QRM-QRN.net> wrote:
> >>
> >> >IIRC, in the Olde Days CHU was on 7,333.3333333333 kcs.
> >> >Is my memory hazy?
> >> >If not, when and why did they change?
> >>
> >> If they changed, it must have been at least 25 years ago --because I
> >> remember CHU's frequency being 7335 kHz from my novice days back then.
> >>
> > I could have sworn that CHU was on 7,333.3333333333 because a few
> > years back I saw a reference to 7335KHz and thought that couldn't
> > be right. Yet, checking the 1972 ARRL Handbook, I was licensed
> > that year, it is indeed 7335KHz.
>
> Yes -- I'm rememberin' from back in the early 1960's. I was stationed
> in Germany and oftentimes CHU was easier to copy than WWV.
> My memory bank seems to remember it as 7,333.3333333333333....
>
> 73
> Jonesy
> --
> | Marvin L Jones | jonz | W3DHJ | OS/2
> | Gunnison, Colorado | @ | Jonesy | linux __
> | 7,703' -- 2,345m | frontier.net | DM68mn SK

194. VE2SWL, Jordan Arndt, THIEF semi-retraction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 23:20:22 UTC
From: Webster Williams <kr4wm@DonchaWishuKnew.com>
Message-ID: <MPG.16a5488aac7e8b11989823@news-server.sc.rr.com>
Source record: 47534
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.shortwave,rec.radio.swap

TO WHOM IT MAY CONCERN:

I posted messages in several newsgroups last month in reference to a Jordan Arndt, VE2SWL, of Calgary, AB, Canada, concerning his failure to ship items which I had paid for. In spite of my filing mail and wire fraud charges against Mr. Arndt, I told him that I would place an information bulletin in the newsgroups retracting the statements I made if I ever received my merchandise.

Mr. Arndt has been kind enough to allow me to pay for shipping a second time via Federal Express, and he allowed FedEx to come by his home at my expense to retrieve my merchandise and bring it to me. It arrived about a week ago, and was exactly what I had purchased.

I had originally paid for the items around October 15th, and it just took my paying shipping a second time, many threatening letters, and two and a half months for my goods to arrive. But Mr. Arndt DID finally come through on my items, so I can't fault him on the items. The items I ordered WERE in the box, and they WERE in good condition.

So, instead of stealing my money for goods, it appears that he actually only stole my money for shipping. I apologize to Mr. Arndt for accusing him of stealing something he didn't steal.

Mr. Arndt was nice enough to explain that he had been undergoing financial difficulties and that he needed to redirect all the money I sent him for goods and shipping to pay his rent, buy food, etc. and as a result, no longer had the funds I sent him to pay for shipment of my items.

Mr. Arndt, if you are reading this, I apologize for accusing you of stealing -ALL- of my money. I now know you only intended to steal -PART- of it. Please excuse me for placing false information prior bulletin concerning your theft. I take back every last word.

Thank you all for taking the time to read this,

Webster D. Williams, KR4WM in Myrtle Beach, SC
e-mail address available at QRZ.COM

195. Heathkit SB-220 For Sale $450 or best offer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 23:29:26 UTC
From: Porkfatsoup@hotmail.com
Message-ID: <4c37bccf.0201081529.22e0feff@posting.google.com>
Source record: 47535

I have a Heathkit SB-220 amp for sale. Has just been professionally
checked out and is in great shape. Has several of the mods and comes
with
a spare 3-500z tube. Asking $450 location is in Chesapeake,Virginia
willing to ship anywhere in usa.If your looking for a great amplifier
that will give you years of service this is the one that will work for
you.

196. Re: CHU frequencies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 23:33:33 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrna3n0ef.6id.QSB@animas.frontier.net>
Source record: 47536

On Tue, 08 Jan 2002 23:06:24 GMT, Peter J. Bertini scribbled:

> From the websites, and all agree...
>
> Three frequencies are used: 3330, 7335, and 14 670 kHz.

hmmm...
Was that web site up in 1963?

Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

197. Re: Parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 23:37:58 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C3B82D6.65A7E2A7@ieee.org>
Source record: 47537

Do a search for "Dans Small Parts". They have it and will ship to Canada.

Clyde, KA1CRV
Walpole, MA

Johnathon and Courtney Chihonik wrote:

> Hey there, this is for any of the Canadians who are watching this group.
> I'm just getting into amateur radio and wondering where we (as
> Canadians) can order components from. I have a digikey catalog, but cant
> find some of the more RF type stuff, like a NE612 osc/mixer. Does anyone
> know of a good place to order these?
>
> TIA
> Johnathon Chihonik

198. Canadian Recommendation for Small Parts..Anyone like to split on costs??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-08 23:53:37 UTC
From: ve3ab@mondenet.ca
Message-ID: <3c3b8628.134751960@news.mondenet.com>
Source record: 47538

Im thinking of making up a parts order to Dans Small Parts USA..anyone in OTTAWA vicinity care to order with me (to split costs??)..73 Earl VE3AB

199. Re: CHU frequencies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 00:28:20 UTC
From: "Peter J. Bertini" <commquart@home.com>
Message-ID: <E8M_7.106635$Y6.10436476@news1.rdc1.ct.home.com>
Source record: 47539

Jonesy

You have an old ARRL Handbook kicking around? Bet they
gave the frequencies...

Pete

"Allodoxaphobia" <QSB@QRM-QRN.net> wrote in message
news:slrna3n0ef.6id.QSB@animas.frontier.net...
> On Tue, 08 Jan 2002 23:06:24 GMT, Peter J. Bertini scribbled:
>
> > From the websites, and all agree...
> >
> > Three frequencies are used: 3330, 7335, and 14 670 kHz.
>
> hmmm...
> Was that web site up in 1963?
>
> Jonesy
> --
> | Marvin L Jones | jonz | W3DHJ | OS/2
> | Gunnison, Colorado | @ | Jonesy | linux __
> | 7,703' -- 2,345m | frontier.net | DM68mn SK

200. Re: iLINK boards + kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 00:29:03 UTC
From: john <w9jcm@arrl.net>
Message-ID: <j9M_7.13$6N.320@newsfeed.intelenet.net>
Source record: 47540
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Dont forget to mention
www.ilinkboards.com

"Duffer" <hduff@rogers.com> wrote in message
news:3C3AF6F0.6A258EB4@ica.net...
> If anyone is interested in setting up an iLINK
> link radio or repeater, check out:
> www.iLINKca.com
>
> They have boards, kits and completed units
> for an iLINK interface.
> You can pay by PayPal or order by mail.
>
>
>

201. Re: VE2SWL, Jordan Arndt, THIEF semi-retraction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 00:33:18 UTC
From: phil <phil@phil.com>
Message-ID: <u3n3rb142d4239@corp.supernews.com>
Source record: 47541
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.shortwave,rec.radio.swap

damnit Webster! you just *stole* 20 seconds of my time reading your post. of course i'm the one who kept reading so there were grounds for contributory negligence. the judge reduced your charges down to *borrowing* 10 seconds of my time. your fine? having to read this here response :p

phil :D

202. Re: CHU frequencies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 00:35:41 UTC
From: Your Friend Bill <"Remove The NO In The Reply To Address"@coqui.net>
Message-ID: <3C3B905D.5626449C@coqui.net>
Source record: 47542

"Peter J. Bertini" wrote:
>
> Jonesy
>
> You have an old ARRL Handbook kicking around? Bet they
> gave the frequencies...
>
> Pete

65 Handbook says 7335.
-Bill

203. Simple 30 Meter One Tube Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 01:37:54 UTC
From: Ji m <gorf@bellsouth.net>
Message-ID: <w1N_7.250782$BX4.14159571@e3500-atl1.usenetserver.com>
Source record: 47543

Hello all,

I would like to build a 1 tube 10Mhz Transmitter. Anyone have designs, plans, Schematics, Ect.. for one with parts not to hard to get, something simple, xtal controled?

Thanks

Jim - KU4QW

204. Re: Which Came First?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 02:11:43 UTC
From: Your Friend Bill <"Remove The NO In The Reply To Address"@coqui.net>
Message-ID: <3C3BA6DF.D5FC0C1D@coqui.net>
Source record: 47545
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Al Lorona wrote:
>
> I'm just curious: is it correct to assume that the current AM broadcast
> band is really the best choice of frequency for the desired
> characteristics for that service? In other words, was 540-1600 kHz
> (before expansion to 'AM wide' a few years ago) chosen first, and then
> the stations placed there? Or did the stations begin operation in that
> frequency band and just happened to choose a good ground wave frequency
> band for local broadcasting?

I think the latter is closer to the explanation. Actually in the
earliest days it wasn't a 'band' in that context. 360 meters was the
norm for nearly ALL broadcast stations in June 1922 for instance. By
the following year they began spreading out but even still only a scant
few dared go above 1300 kc.

All the while in the early 20s there was an ongoing battle between
amateurs (many of which evolved into broadcasters) and commercial
stations. Hamming for ham-sake scuttled off above 200 meters as their
operating became a pest for broadcast listeners.
Here is an excellent page from an excellent site detailing the creation
of the broadcast band.
http://www.ipass.net/~whitetho/buildbcb.htm
Here's another good page
http://members.aol.com/jeff560/jeff.html

Happy reading,
-Bill

205. Re: Simple 30 Meter One Tube Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 02:27:21 UTC
From: motsteve@mediaone.net
Message-ID: <motsteve-0801022129120001@dplane-176-88-250.pompano.net>
Source record: 47447

In article <w1N_7.250782$BX4.14159571@e3500-atl1.usenetserver.com>, "Ji m" <gorf@bellsouth.net> wrote:

> Hello all,
>
> I would like to build a 1 tube 10Mhz Transmitter. Anyone have designs,
> plans, Schematics, Ect.. for one with parts not to hard to get, something
> simple, xtal controled?
>
> Thanks
>
> Jim - KU4QW

The old Radio Amateur Handbooks had one using a 6DQ6B, but that type of power oscillator is not really that good as the xtal is almost shaken right out of the socket with xtal drive current. You end up with a nice chirpy sound which is fine if you aren't trying to communicate via A1. You do get a lot of QSL's from the OO's, however. :-) I would advise a multi section tube with an oscillator and a final, both of which aren't pushed to the limit in power. Maybe a triode oscillator and a pentode final running less than 5 watts in. I don't have recommendations exactly handy, but I could probably figure something out eventually. There should be others out there that have a ready circuit. Watsa?

SK and 73,

Steve
WB4CZR
Plantation, FL

206. Re: FRS repeater (construction or otherwise)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 02:32:54 UTC
From: Harry <HGK@centurytel.net>
Message-ID: <3C3BABD6.2B63710B@centurytel.net>
Source record: 47546
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

Andrew
Radio Shack made a simplex repeater that would just plug into the mic
and phone jacks of most handheld radios. This repeater would listen and
record then it would retransmit what it recorded on the same frequency.
They no longer sell this but there are still lots of them around for
about $75.

"Andrew H." wrote:
>
> Sorry for any confusion; this is basically what I have in mind:
>
> I live on top of a hill which overlooks most of the town. I can get a good
> signal to and from someone down in the town, but actually being in the city
> greatly reduces the range (as one might expect). What I'd like to do is set
> up something at my house that acts like a satalite of sorts; any
> communications on one specific frequency (channel 12 or something like that
> on the FRS) would get rebroadcast. This would allow other people to take
> advantage of this if they so desired (by using the broadcast channel). I
> wouldn't want any kind of power increase; this is just to solve some LOS
> issues. :)
>
> Again, I'm not trying to increase the range, I'm looking to create a
> reflector of sorts. (The same end result as having someone stay at my house
> and relay messages from one person in the city to the other). ;) Any
> ideas?
>
> Andrew H.
>
> "Andrew H." <and0@west.net> wrote in message
> news:3i9_7.226$d4.6875@newsfeed.avtel.net...
> > I'm looking for a repeater for FRS-band radios. Is one available? If
> not,
> > would it be possible to construct one? I'm not adverse to electronic
> work,
> > by the way. ;) Thanks for any information!
> >
> > Andrew H.
> >
> >
> > (Sorry about cross-posting, but I wasn't sure which group to post to.)
> >
> >

207. Re: Simple 30 Meter One Tube Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 02:53:43 UTC
From: "Peter J. Bertini" <commquart@home.com>
Message-ID: <XgO_7.106638$Y6.10437326@news1.rdc1.ct.home.com>
Source record: 47448

What power level are you striving for? Also, as another poster noted
the higher power single stage rigs are rough on crystal current and you
will have to use FT243 or larger crystal sizes for that class of TX.

Peter

"Ji m" <gorf@bellsouth.net> wrote in message
news:w1N_7.250782$BX4.14159571@e3500-atl1.usenetserver.com...
> Hello all,
>
> I would like to build a 1 tube 10Mhz Transmitter. Anyone have designs,
> plans, Schematics, Ect.. for one with parts not to hard to get, something
> simple, xtal controled?
>
> Thanks
>
> Jim - KU4QW
>
>
>
>

208. Re: FRS repeater (construction or otherwise)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 03:17:40 UTC
From: Marty <nfn04028@naples.net>
Message-ID: <oDO_7.15251$zw3.1585713@newsread1.prod.itd.earthlink.net>
Source record: 47449
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

FRS power limitations might make this impractical, but if I understand correctly what you're trying to do is to have signals from the town repeated back to the town, perhaps you could experiment with a passive repeater.

Passive repeaters can be anything from a simple dipole cut to frequency, two beams back to back, or a sheet of metal that will reflect the signal like a mirror. The latter have been widely used, and still are, to bend signals over and around mountains. Different configurations of passive repeaters are used to get cellphone signals out of buildings that would otherwise attenuate the signals severely.

I don't know what your neighbors would say to a big sheet of metal on your roof, but it might be fun to play with.

Marty

"Andrew H." <and0@west.net> wrote in message news:bxx_7.301$d4.7703@newsfeed.avtel.net...
> Sorry for any confusion; this is basically what I have in mind:
>
> I live on top of a hill which overlooks most of the town. I can get a good
> signal to and from someone down in the town, but actually being in the city
> greatly reduces the range (as one might expect). What I'd like to do is set
> up something at my house that acts like a satalite of sorts; any
> communications on one specific frequency (channel 12 or something like that
> on the FRS) would get rebroadcast. This would allow other people to take
> advantage of this if they so desired (by using the broadcast channel). I
> wouldn't want any kind of power increase; this is just to solve some LOS
> issues. :)
>
> Again, I'm not trying to increase the range, I'm looking to create a
> reflector of sorts. (The same end result as having someone stay at my house
> and relay messages from one person in the city to the other). ;) Any
> ideas?
>
>
> Andrew H.
>

209. Re: VE2SWL, Jordan Arndt, THIEF semi-retraction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 03:59:04 UTC
From: Finalquest <finalquest@earthlink.net>
Message-ID: <ceP_7.15267$Vz3.1648211@newsread2.prod.itd.earthlink.net>
Source record: 47450
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.shortwave,rec.radio.swap

Yo Web...

I'm after Dave Munroe (or whatever he calls himself these days).... In Keene, Ontario, Canada.
Pay double ??? For what you agreed to??? Is Canada the breeding ground for the new internet rip-off artists?? Perhaps, but I wont stand for it. The individual I dealt with, dishman@northshells.net, swl@northshells.net, speedy@northshells.net have one thing in common.... northshells.net... and they have been put on notice. I've taken my case to the FBI and US Postal Service and have hired an investigator in Ontario to nail this guy. I've had many honorable dealings on the net but as of late our dear, loving, neighbors, up north, are more than willing to rip us off. Re-directing of monies ????? Good Lord !!! Is this the new welfare ???? Internet fraud to pay the bills ??? Lock and Load !!!! Let's shut these suckers down !!!!!!! Call the FBI...They are on the net.... Contact the Postal Service !!!! Argh !! Yer breakin my friggin nuts here.... Pay double... It would be cheaper if a bunch of us "Canuc trustin but got ripped off types" would take a bus up north with some Louisvilles and do some serious research . (If you know what I mean.) These "A" holes believe the US-Canada boarder affords them some protection.
Yo !!! Canada !!! I'm declarin' war !!! Thieving rodents !!! Yer goin down !!!!
NUKE CANADA !!! The new welfare state !!!!

"Webster Williams" <kr4wm@DonchaWishuKnew.com> wrote in message news:MPG.16a5488aac7e8b11989823@news-server.sc.rr.com...
> TO WHOM IT MAY CONCERN:
>
> I posted messages in several newsgroups last month in
> reference to a Jordan Arndt, VE2SWL, of Calgary, AB,
> Canada, concerning his failure to ship items which I
> had paid for. In spite of my filing mail and wire
> fraud charges against Mr. Arndt, I told him that I
> would place an information bulletin in the newsgroups
> retracting the statements I made if I ever received
> my merchandise.
>
> Mr. Arndt has been kind enough to allow me to pay for
> shipping a second time via Federal Express, and he
> allowed FedEx to come by his home at my expense to
> retrieve my merchandise and bring it to me. It arrived
> about a week ago, and was exactly what I had purchased.
>

> I had originally paid for the items around October
> 15th, and it just took my paying shipping a second
> time, many threatening letters, and two and a half
> months for my goods to arrive. But Mr. Arndt DID
> finally come through on my items, so I can't fault
> him on the items. The items I ordered WERE in the
> box, and they WERE in good condition.
>
> So, instead of stealing my money for goods, it appears
> that he actually only stole my money for shipping. I
> apologize to Mr. Arndt for accusing him of stealing
> something he didn't steal.
>
> Mr. Arndt was nice enough to explain that he had
> been undergoing financial difficulties and that he
> needed to redirect all the money I sent him for goods
> and shipping to pay his rent, buy food, etc. and as a
> result, no longer had the funds I sent him to pay for
> shipment of my items.
>
> Mr. Arndt, if you are reading this, I apologize for
> accusing you of stealing -ALL- of my money. I now know
> you only intended to steal -PART- of it. Please excuse
> me for placing false information prior bulletin concerning
> your theft. I take back every last word.
>
> Thank you all for taking the time to read this,
>
> Webster D. Williams, KR4WM in Myrtle Beach, SC
> e-mail address available at QRZ.COM
>

210. Re: QRP Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 04:18:27 UTC
From: Paolo Odone <paolo@odone.it>
Message-ID: <62379b69a471b945a26bf08527e84249.27826@mygate.mailgate.org>
Source record: 47451

Consider also another QRP Guru: Hands Elecronics from UK, represented by Kanga
in USA.

http://www.bright.net/~kanga/
http://www.rf-kits.demon.co.uk/index.htm

If you like to use separate kit modules as top class Local Oscillators or
Digital VFO (DDS) see at:

http://www.rf-kits.demon.co.uk/run.htm for DDS3A VFO (using an AD9851)
http://www.sseng.com/catalog/dvfo-ii.htm (using an AD9850)
http://www.nexusenginc.com/products/qrp_vfo.htm (Memories RIT XIT Split etc)
http://members.iinet.net.au/~richardh/VK6BRO.htm (AD9854 one of the best)

Good luck with homebrewing.

Paul, i1odp

"Mike Jenkins, KG4QJM" <KG4QJM@removethis.IsVirtual.com> wrote in message
news:Jo7_7.53055$8e2.16994339@typhoon.southeast.rr.com...

> I've just built a Vectronix 80M QRP transmitter. I'm hooked.
>
> What other QRP kits exists? What are some of the pros and cons for them?
> Overall, is there a single QRP Kit that is the best of the best?
>
> Thanks,
> KG4QJM

--
Posted via Mailgate.ORG Server - http://www.Mailgate.ORG

211. Re: Which Came First?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 04:38:38 UTC
From: Mark Walsh <mark@km6xu.die.spam.die.com>
Message-ID: <a1ghbl$d2a$1@bob.news.rcn.net>
Source record: 47452
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"Al Lorona" <al_lorona@agilent.com> wrote:

> I'm just curious: is it correct to assume that the current AM broadcast
> band is really the best choice of frequency for the desired
> characteristics for that service?

Oscillator technology was a limiting factor in the early 1920s.
There is a great book called, "200 Meters and Down"
(available from the ARRL and elsewhere) that is a good
read with lots of interesting history. Check it out!

Mark Walsh ***** mark@die.spam.die.km6xu.com ***** http://www.km6xu.com

212. Re: VE2SWL, Jordan Arndt, THIEF semi-retraction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 05:52:57 UTC
From: Johnson <robjohn@chesco.com>
Message-ID: <ZUQ_7.52$rU.22792@monger.newsread.com>
Source record: 47453
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.shortwave,rec.radio.swap

Must be those Packys Eh?

> !! Yer breakin my friggin nuts here.... Pay double... It would be cheaper
if
> a bunch of us "Canuc trustin but got ripped off types" would take a bus up
> north with some Louisvilles and do some serious research . (If you know
what
> I mean.) These "A" holes believe the US-Canada boarder affords them some
> protection.
> Yo !!! Canada !!! I'm declarin' war !!! Thieving rodents !!! Yer goin down
> !!!!
> NUKE CANADA !!! The new welfare state !!!!
>
>
>
>
>
>
> "Webster Williams" <kr4wm@DonchaWishuKnew.com> wrote in message
> news:MPG.16a5488aac7e8b11989823@news-server.sc.rr.com...
> > TO WHOM IT MAY CONCERN:
> >
> > I posted messages in several newsgroups last month in
> > reference to a Jordan Arndt, VE2SWL, of Calgary, AB,
> > Canada, concerning his failure to ship items which I
> > had paid for. In spite of my filing mail and wire
> > fraud charges against Mr. Arndt, I told him that I
> > would place an information bulletin in the newsgroups
> > retracting the statements I made if I ever received
> > my merchandise.
> >
> > Mr. Arndt has been kind enough to allow me to pay for
> > shipping a second time via Federal Express, and he
> > allowed FedEx to come by his home at my expense to
> > retrieve my merchandise and bring it to me. It arrived
> > about a week ago, and was exactly what I had purchased.
> >
> > I had originally paid for the items around October
> > 15th, and it just took my paying shipping a second
> > time, many threatening letters, and two and a half
> > months for my goods to arrive. But Mr. Arndt DID
> > finally come through on my items, so I can't fault
> > him on the items. The items I ordered WERE in the

> > box, and they WERE in good condition.
> >
> > So, instead of stealing my money for goods, it appears
> > that he actually only stole my money for shipping. I
> > apologize to Mr. Arndt for accusing him of stealing
> > something he didn't steal.
> >
> > Mr. Arndt was nice enough to explain that he had
> > been undergoing financial difficulties and that he
> > needed to redirect all the money I sent him for goods
> > and shipping to pay his rent, buy food, etc. and as a
> > result, no longer had the funds I sent him to pay for
> > shipment of my items.
> >
> > Mr. Arndt, if you are reading this, I apologize for
> > accusing you of stealing -ALL- of my money. I now know
> > you only intended to steal -PART- of it. Please excuse
> > me for placing false information prior bulletin concerning
> > your theft. I take back every last word.
> >
> > Thank you all for taking the time to read this,
> >
> > Webster D. Williams, KR4WM in Myrtle Beach, SC
> > e-mail address available at QRZ.COM
> >
>
>

213. Re: VE2SWL, Jordan Arndt, THIEF semi-retraction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 06:46:48 UTC
From: Chris <christopher_an@sympatico.ca>
Message-ID: <3C3BE758.B4D3B65D@sympatico.ca>
Source record: 47454
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.shortwave,rec.radio.swap

> Yo !!! Canada !!! I'm declarin' war !!! Thieving rodents !!! Yer goin down
> !!!!
> NUKE CANADA !!! The new welfare state !!!!

You have very serious psychological problem. Probably forgot to take an
anti-depression pill tonight. Go ask your doctor!

214. Re: VE2SWL, Jordan Arndt, THIEF semi-retraction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 06:54:22 UTC
From: Chris <chris_somebody@sympatico.ca>
Message-ID: <3C3BE91D.20209F87@sympatico.ca>
Source record: 47455
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.shortwave,rec.radio.swap

> Yo !!! Canada !!! I'm declarin' war !!! Thieving rodents !!! Yer goin down
> !!!!
> NUKE CANADA !!! The new welfare state !!!!

You have very serious psychological problem. Probably forgot to take the
anti-depression pill tonight. Go ask your doctor!

215. FRAUD ALERT:gorgeousmack@hotmail.com

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 08:42:23 UTC
From: sky444@mint.net
Message-ID: <af3f6abe.0201090042.7a33192c@posting.google.com>
Source record: 47456

Do not be ripped off by this person,they are currently under
investigation for mail fraud via the internet.

Michelle Clark
4005 Old Spanish Trail apt. F 28
New Iberia,Louisiana 70560

216. Re: Passive LC filter design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 09:08:17 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <a1h19j$f65$1@nntp9.atl.mindspring.net>
Source record: 47458

Clyde:

As several postings to this thread have noted, filter design, even "passive LC" filter design is an extensive field and it can occupy from at least a couple of years up to a lifetime to "master" the art. Given a very thorough EE level background.

A microwave textbook however is probably not the best place to start!

IMHO... filter design is one of the most rewarding engineering design methodologies to study since it encompasses all aspects of engineering design, from deep mathematical theory to practical implementation issues all in an elegant framework spanning the complete range of design issues from requirements and specifications on up to implementation, practical construction and manufacturability.

That said, and since... most cannot dedicate a lifetime to study this art and need immediate design solutions, you will find that for "most" applications encountered by the vast majority of basic design problems, there are readily available a number of "cookbooks" from which standard designs can be easily extracted.

In particular for the simple "all-pole" designs, there are extensive tabulations of LC values available.

In fact, for some particular well known all-pole approximations (e.g. Butterworth - a.k.a maximally flat, and, Chebychev - a.k.a. equiripple) there are several elegant but extremely simple explicit closed form formulae for the element values of the corresponding LC ladder filters. The theory behind these beautiful formulae is very deep, and their derivation involves mathematics beyond the ken of most graduate engineers, but the formulae are *VERY* simple.

I'll post some references here below which include something on the explicit formulae plus a lot of standard cookbook tabulations:

The so-called all-pole passive LC designs are relatively simple. They, have no finite, non-zero transmission zeros. All of their branches or arms are simple L or C elements in the low pass case. All of the transmission zeros, or "loss-poles" as the guru's call them, of all-pole low pass filters occur at

infinite frequency.

Here is the *amazingly* simple formula, due to Bennett, for the the values of the elements of the matched
Butterworth low pass filter. Your average pocket calculator can generate the values for very high order filters in but
a few moments, if you have a steady hand!

Ta da....

Am = 2*sin((2m-1)*Pi/2*N)

Where N is the "order" of the filter (i.e. the total number of L's and C's), and...m are the element numbers from 1 to N,
with Pi = 3.1416... according to the ancient Greeks, and sin being the sine function, with Am being the value of the
element (L in Hy for m odd and for, C in Fd for m even). Of course this is a normalized Butterworth filter with passband
cutoff at w =1 (Omega = 1 rad/sec)and termination impedances of 1 Ohm, and so the values would have to be
de-normalized as usual .

There are several other similar simple formulae for Chebychev and other filters...

I am always amazed that these simple formulae for passive LC filter design are not more widely known and used...
... too easy I guess!

More advanced designs with finite, non-zero transmission zeros, which offer much higher stopband supression than
all-poles, are often called Elliptic function, Cauer parameter, or Darlington parameter, filters. The name Elliptic
comes from the fact that the Elliptic Integrals are used in the approximation stage of the development of such filters.
The Elliptic functions are sort of like the trigonometric functions. That is they are periodic like the sinusoids, but have
the amazing property that they are periodic in two dimensions, not just one! Hence they can be used to generate
funtions/curves with equirpple behavior in two bands. The passband and the stopband! BTW... Cauer was a
German engineer and Darlington was an American engineer who simultaneously but separately developed the theory
for the Elliptic function filters.

If you are interestd in pursuing this filed, it is well worth the effort in terms of it's intellectual rewards, however, it's
not a study that will pay millions $$$ for your extensive study efforts.

Study filter design for the love of it! Heh, heh. Otherwise use the cookbooks!

I'd copy the pages on explicit formulae from Weingerg referenced below if I wanted the best pasive LC cookbook.
With those few formulae on a page or two, and a modern pocket calculator you can easilybvbe a "passive LC filter
guru" and amaze all of your friends...

Here's some key references, culled from my own library on passive LC filter design, to get you started:

The classic on the whole design methodology is:

1. Rudy Saal, and E. Ulbrich, "On the Design of Filters by Synthesis", IRE Trans., Vol CT-5, pp. 284-327, Dec. 1958.

A neat round up of the most amazing history of this field by one of the "greats" is:

2. Anatoly I. Zverev, "The Golden Anniversary of Electric Wave Filters", IEEE Spectrum, Vol. 3, pp. 129 - 131, March 1966.

Zverev also has published an extensive tabulation of filters by their element values:

3. Anatoly I. Zverev, "Handbook of Filter Synthesis", John Wiley, New York, 1967.

For an extensive tabulation of all kinds of filters by their mathematical parameters, poles and zeros, see:

4. Erich Christian and Egon Eisenmann, "Filter Design Tables and Graphs", John Wiley, New York, 1988.
(Find it in your nearest technical library on the shelves at TK7872.F5C5)

For many simple explicit formulae of LC ladder filters, and some background on their derivation see Weinberg, pp. 651-659,
there is *amazing* stuff in there, write down those formulae and keep them in your shirt pocket!!! :

5. Louis Weinberg, "Network Analysis and Synthesis", McGraw-Hill, 1962.
(Find it in your nearest technical library shelved at call number TK3226.W395)

Weinberg also has plenty of tabulations including some unique ones for "pre-distorted" designs that take into account
element value losses..

For a lot of very high level practical stuff on filter design, including transformations to get "nice" element value ranges,
some neat stuff on crystal filters, and some more tabulations see...

6. DeVerl S. Humphreys, "The Analyisis, Design and Synthesis of Electrical Filters", Prentice-Hall, 1970.
(Find it in your nearest technical library, shelved at call number TK782.F5H84)

And last but not least for the "best" practical explanation of it all, heh, heh...

7. Adel S. Sedra, and Peter O. Brackett, "Filter Theory and Design: Active and Passive", Matrix Publishers,
Champaign, 1978. (Shelved at call number TK7872.F5S42)

Enjoy!

Best,

--Peter K1PO

"Clyde R. Shappee" <cshappee@ieee.org> wrote in message news:3C392682.78CA8E3C@ieee.org...
> I am working through the math involved in Passive LC filter design.
>
> I have books that give tables of component values on how to do this, all
> normalized to 1Hz. I am fine with that. All the tables are for designs
> with no Zeros in the transfer function; they are "All Pole" designs.
>
> In my text on microwave circuit design, it talks about filter synthesis
> and the designs have Zeros in the transfer function. Obviously, this
> means that the filter has a capacitor on its input.
>
> What is the real difference? Why should I care? How do I use the
> methods in the microwave book to synthesize a filter that is all pole?
>
> Any help or direction to literature would be greatly appreciated.
>
> Clyde
>
> KA1CRV
>

217. Re: Which Came First?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 09:09:21 UTC
From: "William E. Sabin" <sabinw@mwci.net>
Message-ID: <3C3C08C1.3090501@mwci.net>
Source record: 47459
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Al Lorona wrote:

> I'm just curious: is it correct to assume that the current AM broadcast
> band is really the best choice of frequency for the desired
> characteristics for that service? In other words, was 540-1600 kHz
> (before expansion to 'AM wide' a few years ago) chosen first, and then
> the stations placed there? Or did the stations begin operation in that
> frequency band and just happened to choose a good ground wave frequency
> band for local broadcasting?
>
> I've been reading some of the history of KDKA, which of course was the
> first commercial broadcast station in Pittsburgh in 1920 (on 360 meters,
> according to the original FCC license), and it seems that the
> Westinghouse engineers knew that starting around 1500 kHz ground losses
> increased, making those frequencies less useful for local reception.
> (They apparently didn't know about sky wave propagation). But aside from
> that, is there anything magical about the current broadcast band that
> makes it the best choice?
>
> Thanks,
>
> Al W6LX
>

1) The sizes (dimensions)of the transmit and
receive antennas were reasonable for the BC band,

2) In the early 1920s receiver and transmitter
design and available components were OK for the BC
band frequencies, but not OK at short wave
frequencies.

A good example is FM, which was moved from the 40
kHz region to the 100 MHz region after WWII.
Technology improvements made it possible

Bill W0IYH

218. Re: Soft start for tube amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 09:44:30 UTC
From: Gary Hildebrand <ghldbrd@ccp.com>
Message-ID: <3C3C10FE.93451D7C@ccp.com>
Source record: 47457

John Strupat wrote:
>
> Hi,
>
> I'm interested in adding a circuit to a single 3-500 amp that will gradually
> allow more current to the plate transformer to avoid the impressive current
> spike at power ON.
>
> I've seen circuitry with time delay relays that short out a series resistor
> in the AC line after 10-20 sec. but wonder about using an NTC resistor
> instead?
>
> Am I off track in thinking that a series R that started at say 10 ohms and
> then went to about 0.5 ohm when hot would do the trick?
>
> Thanks,
>
> John VE3PCN

I've considered one of two things: an SCR/Triac softstart circuit fro
the primary, that would ramp up the voltage over several seconds. Or
doing the series resisstor, but using sold state relays with a timing
circuit in the LV side. Goal, not to have mechanical relays going click
and thump.

Garr Hildebrand WA7KKP
St. Joseph, MO

219. SWL White Mountain 20m mod into 15m?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 09:59:53 UTC
From: Olaf <olaf@mail.powermax-lcd.com>
Message-ID: <t2bn3ug01090a1r5q3bcepimroe3uedr20@4ax.com>
Source record: 47460

Hi everyone!

I'm thinking about purchasing a White Mountain TRX, but my main activity would be on 21MHz. Unfortunately, most single band transceiver kits may cover 20m and perhaps 10m, but almost never 15m. Small Wonder Labs has at least a 20m version, but there is no schematic and in their introduction no word about the frequency processing.
So what I would like to ask is: Has anyone ever made a 15m version out of the common 20m version? Or can someone who built it (preferably the 20m version) tell me a bit more about the kit so that I have a better understanding of how difficult such a mod would be?

73! de Olaf, BV/DL7UND

220. Front Panel Layout software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 11:24:18 UTC
From: Philip de Cadanet <phil@invest.fsbusiness.co.uk>
Message-ID: <Q69MOEAihCP8Ewww@invest.fsbusiness.co.uk>
Source record: 47468

Can anyone recommend any of the above and a possible source?

Win based please.

Tnx

Phil G4ZOW

221. Re: VE2SWL, Jordan Arndt, THIEF semi-retraction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 11:50:37 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <dqah1a.9ub.ln@darkstar.example.net>
Source record: 47475
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.shortwave,rec.radio.swap

> NUKE CANADA !!! The new welfare state !!!!
>

We don't need this cross-posted crap on r.r.a.h. The
S/N ratio on this group seems to get worse every day.

Followup set to alt.flame

73, Ed. EI9GQ.

--
Remove 'X' to replay by e-mail
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

222. Re: Parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 12:10:26 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <SqW_7.41189$fe1.790389@bgtnsc06-news.ops.worldnet.att.net>
Source record: 47461

Future Electronics, in Canada, is the best supplier of Signetics parts, such as the NE612. The only catch is that you have a minimum order of at least one rail of them. This isn't too bad, since the last time that I bought some SA602s, I paid $1.26 each for them. That was around 60 dollars for the rail.

Pete

Clyde R. Shappee <cshappee@ieee.org> wrote in message news:3C3B82D6.65A7E2A7@ieee.org...
> Do a search for "Dans Small Parts". They have it and will ship to Canada.
>
> Clyde, KA1CRV
> Walpole, MA
>
> Johnathon and Courtney Chihonik wrote:
>
> > Hey there, this is for any of the Canadians who are watching this group.
> > I'm just getting into amateur radio and wondering where we (as
> > Canadians) can order components from. I have a digikey catalog, but cant
> > find some of the more RF type stuff, like a NE612 osc/mixer. Does anyone
> > know of a good place to order these?
> >
> > TIA
> > Johnathon Chihonik
>

223. Re: Which Came First?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 12:17:08 UTC
From: Jim <w2mmr@nc.rr.com>
Message-ID: <8xW_7.34381$Cd6.7436126@typhoon1.southeast.rr.com>
Source record: 47462
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"William E. Sabin" <sabinw@mwci.net> wrote in message
news:3C3C08C1.3090501@mwci.net...

[snip]

> A good example is FM, which was moved from the 40
> kHz region to the 100 MHz region after WWII.
> Technology improvements made it possible
>
> Bill W0IYH
>

Technology improvements AND General Sarnoff's all-consuming drive to screw
Edwin H. Armstrong through any means possible, including Sarnoff's contacts
in the government.

Jim - W2MMR

224. Re: Which Came First?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 12:59:18 UTC
From: Gary Glaenzer <nobulltrans@irtc.net>
Message-ID: <F8X_7.124$qgt.11206798@news2.randori.com>
Source record: 47463
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

```
"Jim" <w2mmr@nc.rr.com> wrote in message
news:8xW_7.34381$Cd6.7436126@typhoon1.southeast.rr.com...
>
> "William E. Sabin" <sabinw@mwci.net> wrote in message
> news:3C3C08C1.3090501@mwci.net...
>
> [snip]
>
> > A good example is FM, which was moved from the 40
> > kHz region to the 100 MHz region after WWII.
> > Technology improvements made it possible
> >
> > Bill W0IYH
> >
>
> Technology improvements AND General Sarnoff's all-consuming drive to screw
> Edwin H. Armstrong through any means possible, including Sarnoff's
contacts
> in the government.
>
> Jim - W2MMR
>

Technology improvements AND General Sarnoff's all-consuming drive to screw
Edwin H. Armstrong through any means possible, including Sarnoff's contacts
in the government AND broadcasters' ever-present 'we need more spectrum'
wailing, moaning, and gnashing of teeth.
```

225. Re: Kit companies?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 13:48:32 UTC
From: Per Enocson <08.7676765@telia.com>
Message-ID: <QSX_7.4682$n4.892291@newsc.telia.net>
Source record: 47464

Ryan,

If you want a quality rig, good instructions and excellent
customer/technical support, go to www.elecraft.com.

The K1 is probably the best starting kit, and there is only one word for the
K2: superb.

73/ Per SM0WRA
"KC8PMX" <kc8pmx@tm.net> skrev i meddelandet
news:Mei_7.16$xu.2005@newshog.newsread.com...
> Does anyone have the URL's for any kit building manufacturers? I have the
> one for Ramsey but am looking for others. I am a newbie when it comes to
> this, and want to try learning a little bit more through the making of
some
> kits.
>
> Thanks,
>
> Ryan, KC8PMX
>
>
>

226. Re: Kit companies?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 13:55:20 UTC
From: Per Enocson <08.7676765@telia.com>
Message-ID: <cZX_7.4685$n4.892463@newsc.telia.net>
Source record: 47465

Ryan,

Forgot to tell you about Wilderness Radio at
http://www.fix.net/jparker/wild.html

Have built both the SST and the Sierra with excellent results and super
support from "qrpbob".

Believe the SST or the Norcal 40 are the best kits first time builders (if
you are?).

Good luck!

72/73 s Per / SM0WRA

"ac6v" <hamguide73@ix.netcom.com> skrev i meddelandet
news:3C39CE8A.1D767D7@ix.netcom.com...
> Yep -- see URL:
> http://ac6v.com/kits.htm
> --
> 73 From AC6V, Rod In Oceanside, CA
> I doubt, therefore I might be!
> http://ac6v.com
> ==========
>
> KC8PMX wrote:
>
> > Does anyone have the URL's for any kit building manufacturers? I have
the
> > one for Ramsey but am looking for others. I am a newbie when it comes
to
> > this, and want to try learning a little bit more through the making of
some
> > kits.
> >
> > Thanks,
> >
> > Ryan, KC8PMX
>

227. Re: QRP Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 13:57:31 UTC
From: Per Enocson <08.7676765@telia.com>
Message-ID: <f%X_7.4688$n4.892580@newsc.telia.net>
Source record: 47466

YES, K2 from Elecraft, simply the best!

72`s / Per SM0WRA
"Paolo Odone" <paolo@odone.it> skrev i meddelandet
news:62379b69a471b945a26bf08527e84249.27826@mygate.mailgate.org...
> Consider also another QRP Guru: Hands Elecronics from UK, represented by
Kanga
> in USA.
>
> http://www.bright.net/~kanga/
> http://www.rf-kits.demon.co.uk/index.htm
>
> If you like to use separate kit modules as top class Local Oscillators or
> Digital VFO (DDS) see at:
>
> http://www.rf-kits.demon.co.uk/run.htm for DDS3A VFO (using an AD9851)
> http://www.sseng.com/catalog/dvfo-ii.htm (using an AD9850)
> http://www.nexusenginc.com/products/qrp_vfo.htm (Memories RIT XIT Split
etc)
> http://members.iinet.net.au/~richardh/VK6BRO.htm (AD9854 one of the best)
>
> Good luck with homebrewing.
>
> Paul, i1odp
>
>
> "Mike Jenkins, KG4QJM" <KG4QJM@removethis.IsVirtual.com> wrote in message
> news:Jo7_7.53055$8e2.16994339@typhoon.southeast.rr.com...
>
> > I've just built a Vectronix 80M QRP transmitter. I'm hooked.
> >
> > What other QRP kits exists? What are some of the pros and cons for
them?
> > Overall, is there a single QRP Kit that is the best of the best?
> >
> > Thanks,
> > KG4QJM
>
>
>
>
> --
> Posted via Mailgate.ORG Server - http://www.Mailgate.ORG

228. Re: VE2SWL, Jordan Arndt, THIEF semi-retraction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 14:56:16 UTC
From: oneangryman@hotmail.com
Message-ID: <8c61e9d6.0201090656.5ae9fd55@posting.google.com>
Source record: 47467
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.shortwave,rec.radio.swap

"Finalquest" <finalquest@earthlink.net> woke up from a drug induced stuper and wrote in message news:<ceP_7.15267$Vz3.1648211@newsread2.prod.itd.earthlink.net>...
> Yo Web...
>
> I'm after Dave Munroe (or whatever he calls himself these days).... In
> Keene, Ontario, Canada.

Snipped for the safety of the NG

> Yo !!! Canada !!! I'm declarin' war !!! Thieving rodents !!! Yer goin down
> !!!!
> NUKE CANADA !!! The new welfare state !!!!
>

Hey "Finalquest" <finalquest@earthlink.net> your real name wouldn't be Osama bin drinkin' would it?

Nuke Canada? Are you really THAT STUPID? Are you going to kill millions of nice innocent people just because your stupid and lost some money to ONE thief?

Why don't you just drive up to Canada and pay Mr. Munroe a visit in person, that in it self will suprise the hell out of him. And while your there in Ontario drop by the RCMP post and talk it over with them? I'm sure they would like to know about him. But don't mention you posted that trash about nuking Canada, or they might just take a cold hard look at YOUR ACTIVITIES!

I'm damn glad you don't have control over ANY of our national defense structure!! BTW if your a ham please turn in your license, you don't deserve to be one!

Signed
One Angry Man, but not at our Canadian friends.
Just at 3 Alarm Jerks like Finalquest!

229. Re: Which Came First?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 15:19:32 UTC
From: Sparks W4EAS <sparksw4eas@mindspring.com>
Message-ID: <3C3C5F84.32D7@mindspring.com>
Source record: 47469
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

After WW-2 the FM band was moved from about (40 MHZ) not Khz to the current band. 73 Sparks W4EAS

230. Re: Front Panel Layout software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 15:23:26 UTC
From: Frank Worm <fworm@norpak.ca>
Message-ID: <3C3C60CD.8C8C7BFB@norpak.ca>
Source record: 47470

Autocad works for me.
For really large graphics (text) I sometimes use Coreldraw.

Philip de Cadanet wrote:

> Can anyone recommend any of the above and a possible source?
>
> Win based please.
>
> Tnx
>
> Phil G4ZOW
>

231. Re: Front Panel Layout software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 16:06:26 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c3c68e5.400841@news.freeserve.net>
Source record: 47471

On Wed, 9 Jan 2002 11:24:18 +0000, Philip de Cadanet
<phil@invest.fsbusiness.co.uk> wrote:

>Can anyone recommend any of the above and a possible source?
>
>Win based please.
>
Phil, the best result I have ever seen for 'homemade' panels was done
with a router on an anodised (RadioSpares sourced) panel and the
routed letters were infilled with a black or white, depending on the
background, cellulose paint, If you are interested in the actual
method I'll relate the details via e-mail
atb Mike W, G8NXD

232. Re: Which Came First?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 16:23:26 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3C3C6E7D.A3F38051@ieee.org>
Source record: 47472
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Al Lorona wrote:

> I'm just curious: is it correct to assume that the current AM broadcast
> band is really the best choice of frequency for the desired
> characteristics for that service? In other words, was 540-1600 kHz
> (before expansion to 'AM wide' a few years ago) chosen first, and then
> the stations placed there? Or did the stations begin operation in that
> frequency band and just happened to choose a good ground wave frequency
> band for local broadcasting?
>
> I've been reading some of the history of KDKA, which of course was the
> first commercial broadcast station in Pittsburgh in 1920 (on 360 meters,
> according to the original FCC license), and it seems that the
> Westinghouse engineers knew that starting around 1500 kHz ground losses
> increased, making those frequencies less useful for local reception.
> (They apparently didn't know about sky wave propagation). But aside from
> that, is there anything magical about the current broadcast band that
> makes it the best choice?

Long wave less than 500 KHz was deemed necessary for long haul
communications.
Short wave more than 1500 KHz was deemed to be useless for serious
communication
and was assigned to amateur use. Broadcast was slipped in to that plan at
the shortest
wave length that was still useable.

Bill K7NOM

233. Re: Simple 30 Meter One Tube Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 17:12:06 UTC
From: CA <sm6pxj@hotmail.com>
Message-ID: <7R__7.3888$O5.10171@nntpserver.swip.net>
Source record: 47473

>I would like to build a 1 tube 10Mhz Transmitter. Anyone have designs,
>plans, Schematics, Ect.. for one with parts not to hard to get, something
>simple, xtal controled?
>
>Thanks
>
>Jim - KU4QW
>

http://www.algonet.se/~janax/ecl82bug.htm
http://www.bga.com/~cfb/6LR8_CW_TX.html
http://w1.859.telia.com/~u85920178/tx/1tubetx.htm

/sm6pxj

234. Re: FRS repeater (construction or otherwise)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 18:04:00 UTC
From: "Andrew H." <and0@west.net>
Message-ID: <vC%_7.321$d4.8560@newsfeed.avtel.net>
Source record: 47474
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

That sounds like it would work great! Is there a minimum effective size for the sheet of metal, or a particular material that reflects best? I have no idea what the first two passive repeaters that you mentioned are, so I'm skipping those until I can find out more about them. ;) Would you happen to know of a reliable website where I could read up on passive repeaters?

Thanks, by the way, for figuring out an option that doesn't result in you yelling at me about the legalities of repeating. ;)

Andrew H.

"Marty" <nfn04028@naples.net> wrote in message
news:oDO_7.15251$zw3.1585713@newsread1.prod.itd.earthlink.net...
> FRS power limitations might make this impractical, but if I understand
> correctly what you're trying to do is to have signals from the town
repeated
> back to the town, perhaps you could experiment with a passive repeater.
>
> Passive repeaters can be anything from a simple dipole cut to frequency,
two
> beams back to back, or a sheet of metal that will reflect the signal like
a
> mirror. The latter have been widely used, and still are, to
> bend signals over and around mountains. Different configurations of
passive
> repeaters are used to get cellphone signals out of buildings that would
> otherwise attenuate the signals severely.
>
> I don't know what your neighbors would say to a big sheet of metal on your
> roof, but it might be fun to play with.
>
> Marty
>
>
> "Andrew H." <and0@west.net> wrote in message
> news:bxx_7.301$d4.7703@newsfeed.avtel.net...
> > Sorry for any confusion; this is basically what I have in mind:
> >
> > I live on top of a hill which overlooks most of the town. I can get a
> good
> > signal to and from someone down in the town, but actually being in the
> city
> > greatly reduces the range (as one might expect). What I'd like to do is
> set

> > up something at my house that acts like a satalite of sorts; any
> > communications on one specific frequency (channel 12 or something like
> that
> > on the FRS) would get rebroadcast. This would allow other people to
take
> > advantage of this if they so desired (by using the broadcast channel).
I
> > wouldn't want any kind of power increase; this is just to solve some LOS
> > issues. :)
> >
> > Again, I'm not trying to increase the range, I'm looking to create a
> > reflector of sorts. (The same end result as having someone stay at my
> house
> > and relay messages from one person in the city to the other). ;) Any
> > ideas?
> >
> >
> > Andrew H.
> >
>
>
>
>
>

235. Re: FRS repeater (construction or otherwise)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 19:38:12 UTC
From: Sylvan Butler <Znospam+noZs_0201@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrna3p71d.mtj.Znospam+noZs_0201@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 47477
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Tue, 08 Jan 2002 21:32:54 -0500, Harry <HGK@centurytel.net> wrote:
> Radio Shack made a simplex repeater that would just plug into the mic
...
> They no longer sell this but there are still lots of them around for
> about $75.

$75 ??? INSANE!

Even on ebay $40 is a more typical price. weren't they only $50
that last year before closeout ? I know I got my last couple for
$20 on closeout...

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. ##### change ^ to @ ##### |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Fight terrorism, arm the population!

236. Wm Orr handbooks FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 19:41:08 UTC
From: Patrick Croft <mai@iquest.net>
Message-ID: <3C3C9CD4.129CBD4C@iquest.net>
Source record: 47476

We have a few of these excellent handbooks left from the holiday sale.
Its the latest 23rd edition, the hardbound bible of builders and superb
classic reference
for all areas of interest to hams.

Bill/W6SAI lives on via his many gifts of articles and books. His
writing methods allow all levels of technical backgrounds to understand
and learn from his expertise.

The Handbook normally sells for $52.95, plus shipping and tax in state.
We're selling them for $39.95 plus a flat $5 shipping within the US 48.
That's $44.95 total! You can order online or call,fax, email.
Follow this link for more information:

http://www.websitea.com/mai/Books/books.htm

237. OT! Nuke VE land??!??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 20:18:11 UTC
From: OldBiker <vito@crosslink.net>
Message-ID: <3C3CA583.D036191B@crosslink.net>
Source record: 47478
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.shortwave,rec.radio.swap

One Angry Man wrote:
>
> "Finalquest" wrote
> > NUKE CANADA !!!
> >
> Nuke Canada? Are you really THAT STUPID? ....etc.

And besides that we might have to rob our Canadian friends (now disarmed by their own government) to supplement to our Social Security payments.

Only joking, as I assumed Finalquest was :o)

73, KA2DWW

238. Re: SWL White Mountain 20m mod into 15m?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 21:08:41 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3C3CB0A1.BEA1024D@gte.net>
Source record: 47479

Olaf wrote:

> Hi everyone!
>
> I'm thinking about purchasing a White Mountain TRX, but my main
> activity would be on 21MHz. Unfortunately, most single band
> transceiver kits may cover 20m and perhaps 10m, but almost never 15m.
> Small Wonder Labs has at least a 20m version, but there is no
> schematic and in their introduction no word about the frequency
> processing.
> So what I would like to ask is: Has anyone ever made a 15m version out
> of the common 20m version? Or can someone who built it (preferably the
> 20m version) tell me a bit more about the kit so that I have a better
> understanding of how difficult such a mod would be?
>
> 73! de Olaf, BV/DL7UND

Have you looked at the Elecraft K1- perhaps a bit more money, but a LOT
more radio.

Dale W4OP

239. Re: Passive LC filter design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 21:56:02 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <a1ie93uak1@nntp9.atl.mindspring.net>
Source record: 47480

Henry:

Thanks, Re your question, you might find the following helpful...

Actually that particular Butterworth formula due to Bennett, and lots of other references to various pieces of work on explicit formulae for LC filters can be found in Weinberg.

*** Louis Weinberg, "Network Analysis and Synthesis", McGraw-Hill, New York, 1962. LCCN 61-16969. ***

There is a complete well written section in his Chapter 13, "Practical Filter Design Made EAsy: Handbook Tables of Element Values and Ecplicit Formulas". The section on explicit formulas for LC filters is in Section 13.5 from page 651 -668. About 17 pages.

Most of the work on explicit formulas was published in various serial journals around the world over many years, and Weinberg has done us the service of collecting them all together, along with explanations, expositions, and lots of bibliographic material in the last chapter (Ch13) of his 1962 book.

The formulas are *simple* but the explanations are deep, mathematically sophisticated, and complicated!

Heh, heh... that's probably why the simple formulas are not so well known. They are buried in lots of math derivations! Such is the proclivity of the mathematically inclined!

Weinberg also outlines a number of remaining unsolved problems of explict LC ladder formulas that he notes are probably amenable to analysis and could be attacked and possibly cracked by a persistent researcher... Something to do on those long lazy hazy days of summer... heh, heh. However in these days of digital filters and C++ programming no one seems interested in explicit formulas for LC filters anymore.

That 1962 Weinberg book is probably out of print now, but it can be found in most good technical libraries, you should find it in the technical/engineering library stacks under Library of Congress Call Number TK3226.W395. The explicit formula topic cover only 17 pages in that last Chapter 13, it would be worthwhile to get the book and copy just those pages. At the end of that book, Louis Weinberg gives 13 different references, including Norton, Bennett, Takahasi, Orchard, Saraga, and many others, to the work on explicit formulas.

Best,

--Peter K1PO

> -----Original Message-----
> From: Henry Knoll [mailto:knoll003@tc.umn.edu]
> Sent: Wednesday, January 09, 2002 11:10 AM
> To: ab4bc@ix.netcom.com
> Subject: Re: Passive LC filter design
>
>
> Hi Peter
>
>
> >You wrote:
> >Newsgroups: rec.radio.amateur.homebrew
> >Subject: Re: Passive LC filter design
> >Date: Wed, 9 Jan 2002 04:08:17 -0500
>
> <snip>
>
> >Here is the *amazingly* simple formula, due to Bennett, for the the
> >values of the elements of the matched Butterworth low pass filter. Your
> >average pocket calculator can generate the values for very high order
> >filters in but a few moments, if you have a steady hand!
>
> >Ta da....
> Am = 2*sin((2m-1)*Pi/2*N)
> <snip>
>
> >There are several other similar simple formulae for Chebychev and other
> >filters...
>
> In your references, you don't give a reference for Bennett so I can find
> these other simple formulae.
>
> Will you provide the reference please?
>
> Thanks for the good article and 73,
>
> Henry WA0GOZ
>
>
>

"Clyde R. Shappee" <cshappee@ieee.org> wrote in message
news:3C392682.78CA8E3C@ieee.org...
> I am working through the math involved in Passive LC filter design.
>
> I have books that give tables of component values on how to do this, all
> normalized to 1Hz. I am fine with that. All the tables are for designs
> with no Zeros in the transfer function; they are "All Pole" designs.
>
> In my text on microwave circuit design, it talks about filter synthesis
> and the designs have Zeros in the transfer function. Obviously, this

> means that the filter has a capacitor on its input.
>
> What is the real difference? Why should I care? How do I use the
> methods in the microwave book to synthesize a filter that is all pole?
>
> Any help or direction to literature would be greatly appreciated.
>
> Clyde
>
> KA1CRV
>

240. Re: CHU frequencies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-09 22:11:08 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <a1if9b$1be$1@slb5.atl.mindspring.net>
Source record: 47481

Thread:

CHU has been smack on 7335kcps and the second harmonic at 14,670kcps since
at least 1957 on my receivers. Oops forgot we now use kHz!

--Peter K1PO

"Your Friend Bill" <"Remove The NO In The Reply To Address"@coqui.net> wrote
in message news:3C3B905D.5626449C@coqui.net...
> "Peter J. Bertini" wrote:
> >
> > Jonesy
> >
> > You have an old ARRL Handbook kicking around? Bet they
> > gave the frequencies...
> >
> > Pete
>
> 65 Handbook says 7335.
> -Bill
>

241. Re: SWL White Mountain 20m mod into 15m?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 00:00:53 UTC
From: Olaf <olaf@mail.powermax-lcd.com>
Message-ID: <7bmp3u4vgujuvggpbn3behbum225lu9j8p@4ax.com>
Source record: 47482

On Wed, 09 Jan 2002 21:08:41 GMT, Dale Parfitt <parinc@gte.net> wrote:

>Have you looked at the Elecraft K1- perhaps a bit more money, but a LOT
>more radio.
>
I only need one band (actually only one frequency) in SSB and VERY
simple operation...

73! de Olaf

242. Re: QRP Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 00:04:23 UTC
From: Olaf <olaf@mail.powermax-lcd.com>
Message-ID: <qfmp3ukm3pskkae1qih2kn3kd6uffk800k@4ax.com>
Source record: 47483

On Wed, 09 Jan 2002 13:57:31 GMT, "Per Enocson" <08.7676765@telia.com>
wrote:

>YES, K2 from Elecraft, simply the best!
>
Did I hear someone say "Yehova"...?

www.qrpproject.de/black_forest_e.htm or
www.qrpproject.de in general might be worth a look...

73! de Olaf

243. Re: Front Panel Layout software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 00:24:39 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u3pntfgsfj5a24@corp.supernews.com>
Source record: 47484

Phil

I have a freeware program at http://hfradio.org/wb8rcr

It is available for Linux or Windows command line. Source is available if you want to compile it for another operating system.

As a command line utility, it's a little clunky, nothing at all fancy, but you can lay out a decent panel pretty quickly, which is the objective after all.

..

"Philip de Cadanet" <phil@invest.fsbusiness.co.uk> wrote in message news:Q69MOEAihCP8Ewww@invest.fsbusiness.co.uk...
> Can anyone recommend any of the above and a possible source?
>
> Win based please.
>
> Tnx
>
> Phil G4ZOW
>

244. HP 5385A vs 5386A??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 00:49:20 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <u3pp8jmq38fjb4@corp.supernews.com>
Source record: 47485

the HP 5385A is good to 1.3 GHZ and the 5386A is good to 3.0 GHz. Are the units the same except for a prescaler? I have the 5385A and was wondering if it could be upgrade with good parts from a defunct 5386A.

tnx
hank wd5jfr

245. Re: Passive LC filter design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 01:27:55 UTC
From: Bart Rowlett <BHRowlett@west.raytheon.com>
Message-ID: <3C3CEE1B.688D13CF@west.raytheon.com>
Source record: 47486

Roy Lewallen wrote:

>
[excellent explanation deleted for brevity]

> What I can't recall is whether an imaginary axis pole (actually,
> pole pair) can occur in a theoretically lossless network.

Not if both the source and load impedance are positive real at the
pole frequency. A transfer function pole may exist on the imaginary
axis if at least one termination has a negative real impedance.

bart
wb6hqk

246. FS: Many Items! NATIONAL, MILLER>>UPDATED, REDUXED!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 03:11:30 UTC
From: rlucch2098@aol.com
Message-ID: <20020109221130.19204.00000475@mb-mg.aol.com>
Source record: 47487

Hi Guys;
I got a bunch-o-stuff to sell.
I have added jpg pictures for your viewing pleasure :-)
1- NATIONAL Coil Sockets, NOS, $23.50ppd>>

http://www.baltimorepress.com/~wa2rqy/4nationalitems.jpg

2- NATIONAL MB-40 SL 80-10 meter TANK w/Swingin-Link, NOS, $80.00ppd>>

http://www.baltimorepress.com/~wa2rqy/nationaltank-1.jpg

http://www.baltimorepress.com/~wa2rqy/nationaltank-2.jpg

3-8 Miller coils, etc. NOS w/papers. $20.00ppd>>

http://www.baltimorepress.com/~wa2rqy/8millers1.jpg

http://www.baltimorepress.com/~wa2rqy/8millers2.jpg

4- 6 Miller coils, NOS, most have hardware & papers, $15.00ppd>>

http://www.baltimorepress.com/~wa2rqy/6millercoils.jpg

5- P & B relay & 2 AMPERITE delay tubes, NOS, $10.00ppd>>

http://www.baltimorepress.com/~wa2rqy/pbrelay-tubes.jpg

6- Five(5) ARRL Publications.
Learning Radio Telegraph Code, 13th ed., 1970, 48pgs
SSB for the Radio Amateur, 5th ed., 1970, 253pgs
SSB for the Radio Amateur, 2nd. ed., 1958, 210pgs.
Mobile Manual, 3rd ed., 1962, 270pgs.
VHF manual, 3rd ed., 1972, 252 pgs.
All books in excellent condition, many contruction articles & info.
Price is $20.00ppd>>

http://www.baltimorepress.com/~wa2rqy/5bookset1.jpg

http://www.baltimorepress.com/~wa2rqy/5bookset2.jpg

Thanks es 73.....RICH-WA2RQY RLUCCH2098@aol.com
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

247. FS: PARTING OUT YEASU FT-101EE, Any Interest?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 03:15:53 UTC
From: rlucch2098@aol.com
Message-ID: <20020109221553.19204.00000477@mb-mg.aol.com>
Source record: 47488

Hi All;
I've got a Yaesu FT-101EE that I am parting out.
Everything, including TUBES, Circuit boards, Cabinet, Knob Set.
Everything in Excellent condition!
Everything except the Speech Processor & CW Filter.
E-Mail with your request & offer.
Of course, all request will be weight against totally ruining other parts!
I will NOT sell entire unit!
Thanks es 73.....RICH-WA2RQY RLUCCH2098@aol.com
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

248. Re: Passive LC filter design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 03:57:02 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C3D110E.ED2A09ED@eznec.com>
Source record: 47489

It only took a couple of minutes to come up with an example of an unterminated filter that has transfer function imaginary axis poles: a series L followed by a shunt C (or vice versa). At the radian frequency of 1/sqrt(LC), the response is infinite. But the input impedance is zero at that same frequency, making a rigorous analysis of the filter an exercise in the theoretical properties of impulses.

I was referring to open-circuit voltage transfer functions, which by definition assume an infinite load impedance and aren't a function of any source or load impedance that might be connected (unless the loads are considered to be part of the network). Of course, if a network did have poles on the open-circuit voltage transfer function imaginary axis, any connected finite load resistance would consume an infinite amount of power at the pole frequencies, so a source would have to provide an infinite amount of power. Which even an ideal source couldn't do through any finite amount of source resistance.

But as Bart says, you can get the poles of the filter-load combination onto the axis even with a positive termination resistance if you make the other termination negative. That's one common way of making an oscillator, with an active device providing the negative resistance.

Roy Lewallen, W7EL

Bart Rowlett wrote:
>
> Roy Lewallen wrote:
>
> >
> [excellent explanation deleted for brevity]
>
> > What I can't recall is whether an imaginary axis pole (actually,
> > pole pair) can occur in a theoretically lossless network.
>
> Not if both the source and load impedance are positive real at the
> pole frequency. A transfer function pole may exist on the imaginary
> axis if at least one termination has a negative real impedance.
>
> bart
> wb6hqk

249. Re: Simple 30 Meter One Tube Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 04:53:56 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0201092053.316e84e4@posting.google.com>
Source record: 47490

"Ji m" <gorf@bellsouth.net> wrote in message
news:<w1N_7.250782$BX4.14159571@e3500-atl1.usenetserver.com>...
> Hello all,
>
> I would like to build a 1 tube 10Mhz Transmitter. Anyone have designs,
> plans, Schematics, Ect.. for one with parts not to hard to get, something
> simple, xtal controled?
>
> Thanks
>
> Jim - KU4QW

My first novice transmitter used a single 6V6. It was from an article
in the 1949 ARRL handbook. I used mine on 40m, but it would be simple
to adapt the coil, etc to 30m. The one I made was from almost all junk
parts mainly from an old tube TV. Transformer, etc. The tuff part will
be finding xtals for 30m. I bet they won't be cheap if you have to
have them made. You won't be able to scrouge for old novice xtals like
you can for 80/40m. MK

250. Re: Simple 30 Meter One Tube Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 05:39:34 UTC
From: mjsilva697@earthlink.net
Message-ID: <27085883.0201092139.6760cf4a@posting.google.com>
Source record: 47491

"Ji m" <gorf@bellsouth.net> wrote in message
news:<w1N_7.250782$BX4.14159571@e3500-atl1.usenetserver.com>...
> Hello all,
>
> I would like to build a 1 tube 10Mhz Transmitter. Anyone have designs,
> plans, Schematics, Ect.. for one with parts not to hard to get, something
> simple, xtal controled?
>
> Thanks
>
> Jim - KU4QW

As others have mentioned, it is possible to build a rotten,
crystal-cracking single-tube transmitter -- however, it doesn't -have-
to be that way. The key is to recognize that you have to trade power
for stability and low crystal current, and adjust the transmitter to a
much lower power level than if the tube were being used as an
amplifier. Set the feedback to a minimum, and the screen voltage down
to maybe half (just a starting point) the normal value.

Here's the ARRL 6DQ6 transmitter:
http://www.qsl.net/k3hln/6dq6xmtr.htm

If you can live with even lower power, a high-gain video pentode like
the 6AG7 or 6CL6 can be even more gentle on your crystals.

You should consider joining the glowbugs mailing list, which is
devoted to tube homebrewing of ham gear. From the guide to the radio
newsgroups:

> For homebuilding transmitters and receivers using tube technology,
> there is the Glowbugs e-list; send an email to:
> majordomo@piobaire.mines.uidaho.edu and only write:
> subscribe glowbugs <your@address.here>

73,
Mike, KK6GM

251. Good Guy Alert! David Messing

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 07:51:58 UTC
From: Tom2000 <tom2000@mindspring.com>
Message-ID: <hihq3ukb53mrsc281v3l8fgg5vsutv6nov@4ax.com>
Source record: 47492

Folks,

I recently purchased a signal generator from David Messing, K0RWM. It was one of the best mail order experiences I've ever had.

David checked out the generator for me in his home lab. It works perfectly, just as he described. It was reasonably priced, packed well, shipped promptly, and arrived right on time. His email correspondence was just great, every step of the way. He even provided the tracking number! (No one seems to do that anymore. Used to be the norm. It was a very pleasant surprise.)

I really enjoyed our transaction and our correspondence. He's a great guy. Would I deal with him again? You betcha!

So, if anyone ever has the opportunity to deal with David, rest assured that you will have a perfect, enjoyable transaction, and meet a terrific person in the process.

Very 73,

Tom Lackamp AB9B
Seattle

252. Re: FRS repeater (construction or otherwise)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 13:02:04 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <gjg%7.6645$1s6.1292204@news6-win.server.ntlworld.com>
Source record: 47494
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

> Radio Shack made a simplex repeater that would just plug into the mic
> and phone jacks of most handheld radios. This repeater would listen and
> record then it would retransmit what it recorded on the same frequency.
> They no longer sell this but there are still lots of them around for
> about $75.
==========
The above is a socalled 'parrot repeater' probably equipped with Information Storage Devices Inc (ISD) direct analogue storage technology chips . The older models being the ISD 1000 series ,with ISD 1020A capable of storing up to 20 seconds of audio.
These ICs can be cascaded. In the USA they are/were also available in greeting cards complete with microphone and miniature speaker ,such that the sender could include a voice message.
Some time ago there was an article in QST on these devices.

Frank gm0csz.kn6wh@ntlworld.com

253. How to get low freq quadrature signals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 14:26:41 UTC
From: deyoreo@re.ray.com
Message-ID: <3c3da48c.8147156@proxy.res.ray.com>
Source record: 47495

I need a device that I can input 5 Khz - 150 Khz and output 2 quadrature signals. Anyone know of such a device?

254. Re: Front Panel Layout software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 15:13:32 UTC
From: Philip de Cadanet <phil@invest.fsbusiness.co.uk>
Message-ID: <MCyLwLAc+aP8EwQb@invest.fsbusiness.co.uk>
Source record: 47496

Hello Frank,

>Autocad works for me.
>For really large graphics (text) I sometimes use Coreldraw.
Thank you.

I'll go check their site for a demo.

(((73)))

Phil G4ZOW

255. Re: Front Panel Layout software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 15:14:57 UTC
From: Philip de Cadanet <phil@invest.fsbusiness.co.uk>
Message-ID: <MS5LENAx$aP8Ewxu@invest.fsbusiness.co.uk>
Source record: 47397

Hello Mike,

>Phil, the best result I have ever seen for 'homemade' panels was done
>with a router on an anodised (RadioSpares sourced) panel and the
>routed letters were infilled with a black or white, depending on the
>background, cellulose paint, If you are interested in the actual
>method I'll relate the details via e-mail
I'm going to give Autocad a try first and see how I get on.

thanks again.

(((73)))

Phil G4ZOW

256. Re: How to get low freq quadrature signals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 15:59:07 UTC
From: Mike <m.j.willis@rl.ac.uk>
Message-ID: <a1kfo8$jpu@newton.cc.rl.ac.uk>
Source record: 47423

<deyoreo@re.ray.com> wrote in message
news:3c3da48c.8147156@proxy.res.ray.com...
> I need a device that I can input 5 Khz - 150 Khz and output 2
> quadrature signals. Anyone know of such a device?

Multipliers and Flip flops? Or do you want to do it with analogue signals?

257. Re: NEW TUBE Forsale ! to the serious Amp Builder !

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 18:03:30 UTC
From: Skipp would like Al to keep his word <skipp@pilot.ucdavis.edu>
Message-ID: <a1kl1i$9et$1@woodrow.ucdavis.edu>
Source record: 47398

Hello Al,

How about sending me the replacement Vacuum Relay you promised over a year ago, or my Money back? I replied and sent Emails to you numerous times over the last year and you just ignore me. I've got all your promise to replace or refund Emails on archive if you deny it.

So far, your word is not good to me. When you resolve our deal, I'll be happy to post that you did.

I'll be waiting...
skipp
skipp@pilot.ucdavis.edu

: A.R.Fallas <alishome@uraxis.com> wrote:
: I purchased the following with the Intention of Building up
: a second large HF Amplifier !
: The Project has been cancelled, and therefore offered
: to the serious Builder !

: New in Eimac Box YC-243=3CX6000A7 Triode
: New 80amp/240v Peter Dahl Fil. Tranny
: New Chimney
: New Peter Dahl Filament Chokes
: Complete Package Price=$1200.00
: The tube alone retails for this Price !
: Buy the TUBE and the rest is free!

: * The nice thing about this New Tube is the Mounting aspect!
: No Socket is required , the Grounded + Grid ring , is
: the "Flange mount" and the Chimney fits over the Tube
: Its that Simple !

: **NOTE*** I will split the shipping etc.!

: 73,s to ALL AL

258. Re: How to get low freq quadrature signals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 18:16:36 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0201101016.2ec3379b@posting.google.com>
Source record: 47399

deyoreo@re.ray.com wrote in message news:<3c3da48c.8147156@proxy.res.ray.com>...
> I need a device that I can input 5 Khz - 150 Khz and output 2
> quadrature signals. Anyone know of such a device?

If you want digital signals, the best way I know of is to start with a clock signal that is at 4x the frequency and feed it into a pair of D flip flops (single package) connected as a ring type shift register. The Q outputs of the two FF will give you perfect quadrature +/- digital noise.

The state table for such a circuit would be:

00
01
11
10

I leave it as an excercise for the reader to figure out the circuit. (I'm sure it's already posted somewhere on the Web anyway.)

Or....

You could look up any number of articles on phasing type SSB transmitters and copy the audio phasing network, which usually uses a bunch of resistors and capacitors. They aren't as good, however, and don't cover the frequencies you want so you will have to use different RC values.

259. Re: FRS repeater (construction or otherwise)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 18:42:36 UTC
From: Marty <nfn04028@naples.net>
Message-ID: <wgl%7.19527$zw3.2005666@newsread1.prod.itd.earthlink.net>
Source record: 47400
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

I really don't know how the size or type of metal would affect the efficiency, but I would guess that that any metal would work; and the bigger, flatter and more rigid the better. Choice probably would be more dependent on how you have to mount it.

I don't know of a web page but search on "passive repeaters reflector" (no quotes) on Google, and you'll get more information on the subject than you'll ever want to know. Maybe some good ideas re construction.

Good luck.

"Andrew H." <and0@west.net> wrote in message
news:vC%_7.321$d4.8560@newsfeed.avtel.net...
> That sounds like it would work great! Is there a minimum effective size
for
> the sheet of metal, or a particular material that reflects best? I have
no
> idea what the first two passive repeaters that you mentioned are, so I'm
> skipping those until I can find out more about them. ;) Would you
happen
> to know of a reliable website where I could read up on passive repeaters?
>
> Thanks, by the way, for figuring out an option that doesn't result in you
> yelling at me about the legalities of repeating. ;)
>
>
> Andrew H.
>
>
>
> "Marty" <nfn04028@naples.net> wrote in message
> news:oDO_7.15251$zw3.1585713@newsread1.prod.itd.earthlink.net...
> > FRS power limitations might make this impractical, but if I understand
> > correctly what you're trying to do is to have signals from the town
> repeated
> > back to the town, perhaps you could experiment with a passive repeater.
> >
> > Passive repeaters can be anything from a simple dipole cut to frequency,
> two
> > beams back to back, or a sheet of metal that will reflect the signal
like
> a
> > mirror. The latter have been widely used, and still are, to
> > bend signals over and around mountains. Different configurations of

> passive
> > repeaters are used to get cellphone signals out of buildings that would
> > otherwise attenuate the signals severely.
> >
> > I don't know what your neighbors would say to a big sheet of metal on
your
> > roof, but it might be fun to play with.
> >
> > Marty
> >
> >
> > "Andrew H." <and0@west.net> wrote in message
> > news:bxx_7.301$d4.7703@newsfeed.avtel.net...
> > > Sorry for any confusion; this is basically what I have in mind:
> > >
> > > I live on top of a hill which overlooks most of the town. I can get a
> > good
> > > signal to and from someone down in the town, but actually being in the
> > city
> > > greatly reduces the range (as one might expect). What I'd like to do
is
> > set
> > > up something at my house that acts like a satalite of sorts; any
> > > communications on one specific frequency (channel 12 or something like
> > that
> > > on the FRS) would get rebroadcast. This would allow other people to
> take
> > > advantage of this if they so desired (by using the broadcast channel).
> I
> > > wouldn't want any kind of power increase; this is just to solve some
LOS
> > > issues. :)
> > >
> > > Again, I'm not trying to increase the range, I'm looking to create a
> > > reflector of sorts. (The same end result as having someone stay at my
> > house
> > > and relay messages from one person in the city to the other). ;)
Any
> > > ideas?
> > >
> > >
> > > Andrew H.
> > >
> >
> >
> >
> >
> >
> >
>
>

>

260. Re: How to get low freq quadrature signals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 18:43:45 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <a1knd0$347$1@paris.btinternet.com>
Source record: 47401

<deyoreo@re.ray.com> wrote in message
news:3c3da48c.8147156@proxy.res.ray.com...
> I need a device that I can input 5 Khz - 150 Khz and output 2
> quadrature signals. Anyone know of such a device?

If you can double the input frequency, you can use a couple of flip-flops,
and get your quadrature 5kHz-150kHz out.

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.con
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

261. Re: How to get low freq quadrature signals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 18:47:50 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <a1knkl$t0d$1@knossos.btinternet.com>
Source record: 47402

```
"Leon Heller" <leon_heller@hotmail.com> wrote in message
news:a1knd0$347$1@paris.btinternet.com...
>
> <deyoreo@re.ray.com> wrote in message
> news:3c3da48c.8147156@proxy.res.ray.com...
> > I need a device that I can input 5 Khz - 150 Khz and output 2
> > quadrature signals. Anyone know of such a device?
>
> If you can double the input frequency, you can use a couple of flip-flops,
> and get your quadrature 5kHz-150kHz out.
>

Sorry, I should have said 4X, not double.

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.con
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com
```

262. Does FM Skip????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 19:54:06 UTC
From: Frank Worm <fworm@norpak.ca>
Message-ID: <3C3DF1C2.254F62FA@norpak.ca>
Source record: 47403

Hello All
If a chicken band transceiver modulates FM will it skip
and still be able to decode the message??
Thank in advance
Regards

263. Re: Does FM Skip????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 20:56:41 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <3C3E0009.BD6D6389@dialpoint.net>
Source record: 47404

Yes, it will still talk turkey.

Frank Worm wrote:
>
> Hello All
> If a chicken band transceiver modulates FM will it skip
> and still be able to decode the message??
> Thank in advance
> Regards

264. Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 22:21:05 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <1g3s3u4ov2p2nan1743veugm1imgeasm34@4ax.com>
Source record: 47406

This rambles a bit, but there's a question or two that require some setup.

A few weeks ago, I bought 300 crystals (13.500 MHz) for a few cents each, with the thought that I would try my hand at a few crystal filters.

I measured the average crystal parameters (using the technique suggested by Wes Hayward) as:

Rs = 1.92 ohms
Lm = 4.3048 mH
Cm = 32.321 fF
Ch = 6.2 pF

Using these parameters, I designed a 2 crystal and a 4 crystal filter 1 Khz bandwidth, Butterworth, and breadboarded them today. (For easy measurement, I also built an L matching network at each end to match to 50 ohm test equipment.) Also ran some SPICE simulations on the designs and all seemed OK.

First, the 2 crystal filter. I measured the 1 KHz response, and it looked almost like the SPICE simulation, 3 dB BW 910 Hz, a little tight, but not so bad. Passband looked just like it should, nice top. Ultimate rejection > 80 dB even with breadboard layout. Center frequency (minimum VSWR and also minimum loss) 13500.520 KHz, loss 2.2 dB, return loss 23 dB when filter output terminated with a good 50 ohm load.

I then put the filter on my network analyzer (an old HP8754A) and swept it out, using an outboard FM signal generator for better performance in narrow sweeps. Sure surprised me when I found a second passband, with a 3 dB bandwidth of about 200 Hz width (3 dB points), at 13578.880 KHz. The second passband was only 30 dB down.

I then swept a crystal by itself, and in addition to the normal series and parallel resonance points around 13500 KHz, I found two more series/parallel resonance points, up around the area where I found the second passband, between 75 and 100 KHz above 13500 KHz.

I concluded that the spurious passband is the passband caused by these secondary series/parallel resonance points coinciding.

Question: Anyway to kill this spurious? I have an application that I would like to use a 2 crystal filter in.

I then built the 4 crystal version, and no trace of a spurious response. All performs pretty much in accordance with the theory and SPICE simulations. I'm guessing that the spurious frequencies show greater deviation than the fundamental resonance points and that my first two crystal filter just had an unfortunate alignment of spurs. I'll run some more detailed individual crystal measurements tomorrow and try a different set of crystals in the two crystal filter, but I wanted to see if anyone had some experience in this area and could point me in the right direction.

Jack K8ZOA

265. FS: General Radio Company 200 Ohm poteniometer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 22:22:18 UTC
From: John Grow <jgrow@sympatico.ca>
Message-ID: <gwo%7.17514$qC1.3339361@news20.bellglobal.com>
Source record: 47405

Hello to all,

I have one (1) NOS New old stock, 200 ohm potentiometer. This pot is wire wound with the wiper touching each turn of the coil. Perfect for tuner, variable - something, etc. Complete with orginal box, instructions and mounting hardware.
$ 8.00 plus $ 2.75 shipping CONUS
John

266. Re: How to get low freq quadrature signals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 23:05:42 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C3E1DFA.2111@pop.removethistomailme.net>
Source record: 47407

deyoreo@re.ray.com wrote:
>
> I need a device that I can input 5 Khz - 150 Khz and output 2
> quadrature signals. Anyone know of such a device?

You could generate it directly with an AD9854, but that's probably
overkill for the frequency range you're talking about.

As a cheaper solution, a fast PIC chip might be able to generate the
signals with software timing loops. I think Richard Hosking's site
(http://members.iinet.net.au/~richardh/VK6BRO.htm) has some PIC DDS
emulation code; it would only take a few more lines to provide a
quadrature output.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

267. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 23:52:25 UTC
From: "Harold E. Johnson" <W4ZCB@Home.com>
Message-ID: <ZOp%7.40883$LQ1.12498681@news2.nash1.tn.home.com>
Source record: 47408

> I measured the average crystal parameters (using the technique
> suggested by Wes Hayward) as:
>
> Rs = 1.92 ohms
> Lm = 4.3048 mH
> Cm = 32.321 fF
> Ch = 6.2 pF
>
This looks awfully suspicious to me, I've NEVER seen a crystal with an Rs
that low. With the IL that you describe, could this be a mis-type and really
be 19.2 ohms?

W4ZCB

268. Re: Stroboscope for CW RX tuning

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-10 23:54:03 UTC
From: la8ak.xnd@online.no
Message-ID: <3c3e28fc.23186737@news.online.no>
Source record: 47409

On Sat, 15 Dec 2001 06:20:39 -0600, "William E. Sabin"
<sabinw@mwci.net> wrote:

>>The assumption that replying at zero beat is
>>highly desirable is incorrect. Good and
>>competitive CW operators know that calling as much
>>as 200 Hz off frequency is usually much more
>...
>>
200Hz offset shouldn't cause any problem when I use a 500Hz cw filter
in a contest, but I don't usually expects pile-ups

whatever tactic you wish to use it is important to know what you
do, you must you must know which frequency hit, if you moved the
opposite way would be bad tactic. My first intention was to make a
tool to simplify correct tuning whatever the tactic is

now I found another reference to similar interest, see
http://www.alltel.net/~johnshan/cw_ss_zerobeat.html

Randy Henderson's (WI5W) article in March 1992 QST (Do You Know Where
Your Signal Is?) eloquently described a long-standing shortcoming in
contemporary transceiver design

This is not exactly the construction I am looking for, believe my idea
is better, provided it can be easily achieved. One suggestion is a
center zero meter showing the tuning offset frequency, but need it to
display at least +/-200Hz

/3
Jan-Martin
LA8AK
--
remove ,xnd to reply

269. Technical Question on VOR Transmitter Specifications

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 00:17:13 UTC
From: "Barry L. Ornitz" <ornitzNO@SPAMusa.net>
Message-ID: <Zaq%7.1510$2V4.199338@atlpnn01.usenetserver.com>
Source record: 47410
Cross-posted to: rec.aviation.ifr,rec.radio.amateur.homebrew

These appeared to be the best newsgroups to ask these questions in because of the technical experience of the readers, although my questions are not directly related to flying under instrument flight rules nor to amateur radio. My apologies to those who think this post might be off-topic.

A VOR (VHF OmniRange) transmitter transmits a signal with an antenna system that produces a limacon (or cardioid) shaped pattern. This pattern is rotated either electrically or mechanically thirty times a second. On a distant receiver this produces a signal that is amplitude modulated at a 30 Hertz rate due to the rotation. The transmitter is amplitude modulated by an audio tone of 9960 Hz. This audio tone, actually more properly called a subcarrier, is frequency modulated with a 30 Hz signal. This is the reference signal and the phase of this signal coincides with the phase of the 30 Hz amplitude modulation when the receiver is due North of the transmitter. By measuring the phase difference between the demodulated AM and FM signals, the bearing to the transmitter can be determined at the receiver. The VOR transmitter can also carry other modulation such as voice or tone for identification purposes.

My question is: what is the modulation index (or alternately the frequency deviation) of the 30 Hz FM signal? It would be helpful to also know the percentage of the amplitude modulation also.

Thanks for any help.

Barry L. Ornitz WA4VZQ ornitzNO@SPAMusa.net
Please remove the NO SPAM if you reply directly.

270. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 00:27:22 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <sobs3uc8ebgshak1f3ntpn3qbhln0qnmk7@4ax.com>
Source record: 47411

Good question. All the data I've seen suggests 10 - 30 ohms is the typical range.

My original measurement was based on calculating the series resistance based on voltage readings with the following configuration

SG100 --- [10 dB pad] -- [Xtal test fixture] --- [10 dB pad] --- [50 ohm thru term]-[HP3400A voltmeter]

This run yields 1.92 ohms. (Peaked the frequency of the SG100 to get the xtal series resonance frequency.) The voltage readings were based on the difference between a "through" connection and the crystal in place.

After reading your message, I reran my 5 test crystals, using the same arrangement, but a different method. This time, I set the signal generator (SG100) output to a reference level with each crystal in place. I then substituted a small trimpot (100 ohms maximum) and adjusted the trimpot to get the same voltage reading that I had with the xtal in place. Then, I measured the trimpot with an HP3468A digital multimeter, 4-wire mode. Here are my readings:

Xtal R ohms
1 3.25
2 4.23
3 3.91
4 3.60
5 4.10
Avg 3.82 ohms

I would trust this a bit more than my calculations, but it still isn't at the level one normally might expect.

Some of the filter loss at resonance will come from the two L pads.

But, I don't think Rs is connected with the spurious resonances of the crystals and the spurious filter response.

Jack K8ZOA

On Thu, 10 Jan 2002 23:52:25 GMT, "Harold E. Johnson" <W4ZCB@Home.com> wrote:

>
>
>> I measured the average crystal parameters (using the technique
>> suggested by Wes Hayward) as:
>>

>> Rs = 1.92 ohms
>> Lm = 4.3048 mH
>> Cm = 32.321 fF
>> Ch = 6.2 pF
>>
>This looks awfully suspicious to me, I've NEVER seen a crystal with an Rs
>that low. With the IL that you describe, could this be a mis-type and really
>be 19.2 ohms?
>
>W4ZCB
>

271. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 00:28:13 UTC
From: motsteve@mediaone.net
Message-ID: <motsteve-1001021930180001@dplane-176-88-250.pompano.net>
Source record: 47412

In article <ZOp%7.40883$LQ1.12498681@news2.nash1.tn.home.com>, "Harold E. Johnson" <W4ZCB@Home.com> wrote:

> > I measured the average crystal parameters (using the technique
> > suggested by Wes Hayward) as:
> >
> > Rs = 1.92 ohms
> > Lm = 4.3048 mH
> > Cm = 32.321 fF
> > Ch = 6.2 pF
> >
> This looks awfully suspicious to me, I've NEVER seen a crystal with an Rs
> that low. With the IL that you describe, could this be a mis-type and really
> be 19.2 ohms?
>
> W4ZCB

I agree with Harold on the Rs, but as far as the spurious response goes, I would expect that. I would imagine that you would have to come up with a new model and try to optimize the design via simulator using this new xtal model, but I'm not familiar with this in filters, only in overtone oscillators where you would basically shunt the Rs such that the Barkhausen critia were not met.

Good luck anyway.

Steve
WB4CZR
Plantation, FL

272. Re: How to get low freq quadrature signals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 01:18:44 UTC
From: DrGrok@mungednet.com
Message-ID: <a1ledk$ga8$1@bob.news.rcn.net>
Source record: 47413

If you are trying to generate quadrature signals as a SINGLE frequency within the 5 to 150 kHz band, start with 4X the desired frequency and use 2 D flip-flops as a twisted-ring counter. The 4 possible outputs (Q and !Q from each flop) will each give you the desired output frequency, each at a different 90 degree phase point.

If, however, you are trying to generate a pair of quadrature signals over a instantaneous bandwidth fron 5 to 150 kHz, you need a pair of networks, each consisting of a cascade of all-pass stages. Probably 2 or 3 stages per network for reasonably accuracy. Crossover frequencies of these networks are interleaved to give a 90 degree difference between then across the band.

Dr. G.

In article <3C3E1DFA.2111@pop.removethistomailme.net>,
jmiles@pop.removethistomailme.net wrote:
>deyoreo@re.ray.com wrote:
>>
>> I need a device that I can input 5 Khz - 150 Khz and output 2
>> quadrature signals. Anyone know of such a device?
>
>You could generate it directly with an AD9854, but that's probably
>overkill for the frequency range you're talking about.
>
>As a cheaper solution, a fast PIC chip might be able to generate the
>signals with software timing loops. I think Richard Hosking's site
>(http://members.iinet.net.au/~richardh/VK6BRO.htm) has some PIC DDS
>emulation code; it would only take a few more lines to provide a
>quadrature output.
>
>-- jm
>
>---
>http://www.qsl.net/ke5fx
>Note: My E-mail address has been altered to avoid spam
>---

273. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 01:37:33 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <s6gs3u8c1gaqr540rbtfaror2f6kl11g3l@4ax.com>
Source record: 47414

Harold & Steve:

I ran two SPICE simulations with Rs = 2 ohms and Rs = 4.2 ohms and
compared the insertion loss with what I'm seeing with the 4 crystal
filter.

Measured IL 3.2 dB
Rs=2 ohms 2.0 dB
Rs=4.2 ohms 3.9 dB

This gives me reasonable confidence that the true Rs is in the range
between 2 and 4 ohms. Note that I've used infinite Q for the matching
L's in the SPICE simulation, so there's a half dB or so of IL due to
that not reflected in the SPICE numbers.

Jack K8ZOA

On Fri, 11 Jan 2002 00:28:13 GMT, motsteve@mediaone.net (carltons)
wrote:

>In article <ZOp%7.40883$LQ1.12498681@news2.nash1.tn.home.com>, "Harold E.
>Johnson" <W4ZCB@Home.com> wrote:
>
>> > I measured the average crystal parameters (using the technique
>> > suggested by Wes Hayward) as:
>> >
>> > Rs = 1.92 ohms
>> > Lm = 4.3048 mH
>> > Cm = 32.321 fF
>> > Ch = 6.2 pF
>> >
>> This looks awfully suspicious to me, I've NEVER seen a crystal with an Rs
>> that low. With the IL that you describe, could this be a mis-type and really
>> be 19.2 ohms?
>>
>> W4ZCB
>
>
>I agree with Harold on the Rs, but as far as the spurious response goes, I
>would expect that. I would imagine that you would have to come up with a
>new model and try to optimize the design via simulator using this new xtal
>model, but I'm not familiar with this in filters, only in overtone
>oscillators where you would basically shunt the Rs such that the
>Barkhausen critia were not met.
>
>Good luck anyway.

>
>
>Steve
>WB4CZR
>Plantation, FL

274. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 01:49:52 UTC
From: "Harold E. Johnson" <W4ZCB@Home.com>
Message-ID: <4xr%7.41156$LQ1.12613892@news2.nash1.tn.home.com>
Source record: 47415

> Measured IL 3.2 dB
> Rs=2 ohms 2.0 dB
> Rs=4.2 ohms 3.9 dB
>
> This gives me reasonable confidence that the true Rs is in the range
> between 2 and 4 ohms.

I don't think so, or at least I don't share your confidence. I haven't followed your measurement technique in that I don't recognize some of the equipment you describe, but it's very suspect in my book. I have made 18 pole filters with well under 2 dB IL with crystals with Rs 10-15 ohms. IL is quite dependent on filter bandwidth and I guess I haven't seen what you are designing to in that parameter either.

If you'd care to send me a couple of your 300 rocks, I'd be willing to characterize them with either/both a homebrew test box I made several years back, or a VNA. These two independent measurements have always yielded results within less than one percent of each other.

W4ZCB

275. WTB: Hewlett Packard 853A Mainframe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 02:31:08 UTC
From: Fred Allen <fallen-idc@worldnet.att.net>
Message-ID: <M7s%7.65162$fe1.952320@bgtnsc06-news.ops.worldnet.att.net>
Source record: 47416

Wanted: Hewlett Packard 853A Spectrum Analyzer Mainframe. Please e-mail
price and condition to:

fallen-idc@worldnet.att.net

Thanks,
Fred

276. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 02:43:35 UTC
From: "Harold E. Johnson" <W4ZCB@Home.com>
Message-ID: <rjs%7.41249$LQ1.12661479@news2.nash1.tn.home.com>
Source record: 47417

One thing that would give results like you're measuring is harmonic content in the generator. If that is high, the crystal selectivity gets rid of it in your measurement but the potentiometer doesn't and it looks like you have a crystal with a Q of zillions. Try installing a good BP filter on the output of your generator and see if the Rs goes up. If you measure the 3 dB corners of series resonance, what bandwidth are you seeing on a single crystal?

All filters have pop up. Some can be contained with termination impedances, some with additional poles, some with holder neutralization. I've deleted what started this thread and can't refer back to all of it.

W4ZCB

277. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 02:56:19 UTC
From: "Harold E. Johnson" <W4ZCB@Home.com>
Message-ID: <nvs%7.41311$LQ1.12673968@news2.nash1.tn.home.com>
Source record: 47418

Not to beat this to death, but I re-downloaded the first messages in the thread and reviewed them and have had some other thoughts. Could these possibly be monolithic crystal pairs? You might just carefully pull the cover off one and see whether the crystal has more than one set of plated contacts on each face of the rock.

W4ZCB

278. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 04:42:55 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <a1lqe2hgf1@slb1.atl.mindspring.net>
Source record: 47419
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

"Mark Bell" <bell@blazenet.net> wrote in message
news:u39sj52qbs7k81@corp.supernews.com...
>
> What type of SSB generator will produce the best sideband
>suppression, filter or phasing?
>

My Understanding is that phasing systems typically get around 35 - 40 dB
sideband supression if everything is near perfect... The problem is usually
slight differences in the amplitude and phasing of the two audio channels.
Well, that, and variation in the RF 90 degree LO splitter that changes the
RF pahse shift from one end of the band to the other.....

And, there is some change over time and temperature that usually degrades
the supression by a few more dB as time goes by.

The audio tends to sound 'better' since it isn't filtered to be as narrow
a bandwidth as most crystal filter rigs.

==========

A good crystal filter type transmitter usually has better sideband
supression and it also doesn't change much with time and temperature. It
also lends itself to making a transciever more easily since the filters and
oscillators are already in place.

Jim Pennell
N6BIU

279. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 08:01:36 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <vs4t3ug9jr70ucbamebh8mt7akn5h353eu@4ax.com>
Source record: 47420
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

On Thu, 10 Jan 2002 20:42:55 -0800, "Jim Pennell" <NoSpam@killspam.com> wrote:
>"Mark Bell" <bell@blazenet.net> wrote in message
>news:u39sj52qbs7k81@corp.supernews.com...
>>
>> What type of SSB generator will produce the best sideband
>>suppression, filter or phasing?
>
> My Understanding is that phasing systems typically get around 35 - 40 dB
>sideband supression if everything is near perfect... The problem is usually
>slight differences in the amplitude and phasing of the two audio channels.
>Well, that, and variation in the RF 90 degree LO splitter that changes the
>RF pahse shift from one end of the band to the other.....
>
> And, there is some change over time and temperature that usually degrades
>the supression by a few more dB as time goes by.

In theory, a phasing SSB generator can offer perfect opposite sideband suppression. If implemented in analog tech, things are never perfect, so perfect suppression can't be achieved. However, if you do the SSB generation in DSP, then you *can* have everything perfect (at least to the numeric limits of the DSP). Opposite sideband suppression can be at least 90 dB with existing (affordable) DSP tech.

Some commerically produced amateur transceivers are now using this method of SSB generation (at a very low IF). There are also a few kits and construction projects for the do it yourselfer. One advantage of using DSP for this is that once you have an I/Q style modulator, you can use it to generate *any* arbitrary modulation form (AM, FM, SSB, PSK, FSK, etc) with only a software change.

A low IF DSP modulator/demodulator can be built for under $50 in quantity one from off the shelf parts (much cheaper in mass production). It hardly makes sense to spend the money for a crystal filter type SSB modulator today. The filter alone would cost more than the entire DSP subsystem.

(Of course you may want a filter anyway, on the receive side of a transceiver, to reduce the required dynamic range of the DSP by suppressing out of passband energy at the input to the DSP. But this filter can be less expensive than the one needed for classic filter/product detector designs, because the DSP can do a lot of the filtering while also doing the demodulation.)

Gary

280. Re: Simple 30 Meter One Tube Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 09:18:36 UTC
From: motsteve@mediaone.net
Message-ID: <motsteve-1101020420410001@dplane-176-88-250.pompano.net>
Source record: 47421

In article <25eb70d7.0201092053.316e84e4@posting.google.com>, nm5k@wt.net (Mark Keith) wrote:

> "Ji m" <gorf@bellsouth.net> wrote in message news:<w1N_7.250782$BX4.14159571@e3500-atl1.usenetserver.com>...
> > Hello all,
> >
> > I would like to build a 1 tube 10Mhz Transmitter. Anyone have designs,
> > plans, Schematics, Ect.. for one with parts not to hard to get, something
> > simple, xtal controled?
> >
> > Thanks
> >
> > Jim - KU4QW
>
> My first novice transmitter used a single 6V6. It was from an article
> in the 1949 ARRL handbook. I used mine on 40m, but it would be simple
> to adapt the coil, etc to 30m. The one I made was from almost all junk
> parts mainly from an old tube TV. Transformer, etc. The tuff part will
> be finding xtals for 30m. I bet they won't be cheap if you have to
> have them made. You won't be able to scrouge for old novice xtals like
> you can for 80/40m. MK

The mention of a 6V6 reminded me of a project that I saw in one of the hobby magazines like "Electronics Illustrated" where the author used the tin box from a pack of Ludden's cough drops and put the xtal socket, components, and the 6V6 socket inside the tin box. At the time, being only 13, I thought
that was the neatest thing that I had ever seen (John Glenn's ride took that place later). :-) I wonder if anyone else remembers that one?

I agree also on the xtals. Perhaps another project using a 6CL6 VFO in a Ludden's box? The hang up there is getting the variable cap, but you could cheat a little and use a varactor comprised of 1962 circa diodes such as the 1N62 or such. Engineers, I know that the example is germanium, but I'm just throwing ideas up in the air. After all, we are seeking a new paradigm. :-)

CUL and 73.

Steve
WB4CZR

Plantation, FL

281. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 10:26:10 UTC
From: "William E. Sabin" <sabinw@mwci.net>
Message-ID: <3C3EBDC2.9050208@mwci.net>
Source record: 47422
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Gary Coffman wrote:

> On Thu, 10 Jan 2002 20:42:55 -0800, "Jim Pennell" <NoSpam@killspam.com> wrote:
>
>>"Mark Bell" <bell@blazenet.net> wrote in message
>>news:u39sj52qbs7k81@corp.supernews.com...
>>
>>>What type of SSB generator will produce the best sideband
>>>suppression, filter or phasing?
>>>
>> My Understanding is that phasing systems typically get around 35 - 40 dB
>>sideband supression if everything is near perfect... The problem is usually
>>slight differences in the amplitude and phasing of the two audio channels.
>>Well, that, and variation in the RF 90 degree LO splitter that changes the
>>RF pahse shift from one end of the band to the other.....
>>
>> And, there is some change over time and temperature that usually degrades
>>the supression by a few more dB as time goes by.
>>
>
> In theory, a phasing SSB generator can offer perfect opposite sideband suppression.
> If implemented in analog tech, things are never perfect, so perfect suppression
> can't be achieved. However, if you do the SSB generation in DSP, then you *can*
> have everything perfect (at least to the numeric limits of the DSP). Opposite sideband
> suppression can be at least 90 dB with existing (affordable) DSP tech.
>
> Some commerically produced amateur transceivers are now using this method
> of SSB generation (at a very low IF). There are also a few kits and construction
> projects for the do it yourselfer. One advantage of using DSP for this is that once
> you have an I/Q style modulator, you can use it to generate *any* arbitrary
> modulation form (AM, FM, SSB, PSK, FSK, etc) with only a software change.
>
> A low IF DSP modulator/demodulator can be built for under $50 in quantity one
> from off the shelf parts (much cheaper in mass production). It hardly makes sense
> to spend the money for a crystal filter type SSB modulator today. The filter alone
> would cost more than the entire DSP subsystem.
>
> (Of course you may want a filter anyway, on the receive side of a transceiver, to
> reduce the required dynamic range of the DSP by suppressing out of passband
> energy at the input to the DSP. But this filter can be less expensive than the one
> needed for classic filter/product detector designs, because the DSP can do a lot
> of the filtering while also doing the demodulation.)
>

> Gary
>
>

The limitation for SSB on opposite sideband is set by the linearity of the power amplifiers. For a conventional amateur rig this limit is about 40 to 50 dB below PEP within the audio frequency range of the opposite sideband.

Bill W0IYH

282. Re: Front Panel Layout software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 10:31:13 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <htem1a.1jg.ln@darkstar.example.net>
Source record: 47442

Philip de Cadanet wrote:

> Can anyone recommend any of the above and a possible source?
>
> Win based please.

SmartDraw is pretty good for that kind of job.

73, Ed. EI9GQ.

--
Remove 'X' to replay by e-mail
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

283. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 10:55:26 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C3EC49E.C165B161@eznec.com>
Source record: 47424
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Am I correct in assuming that the energy in the opposite sideband caused by nonlinearity wouldn't be an image of the desired sideband, but a jumbled mass of intermodulation products from the components in the desired sideband? And that you'd have a similar mass on the other side of the desired sideband?

Roy Lewallen, W7EL

"William E. Sabin" wrote:
>
> The limitation for SSB on opposite sideband is set
> by the linearity of the power amplifiers. For a
> conventional amateur rig this limit is about 40 to
> 50 dB below PEP within the audio frequency range
> of the opposite sideband.
>
> Bill W0IYH

284. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 11:29:26 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <54jt3uov627tit2ps87grvbaraeq2tphg9@4ax.com>
Source record: 47425

Harold:

I'll mail you a couple of the crystals. I assume your callbook address
is ok.

Will disassemble one today and see.

I'll also see if I can measure Rs directly with an RF bridge.

Jack

On Fri, 11 Jan 2002 02:56:19 GMT, "Harold E. Johnson" <W4ZCB@Home.com>
wrote:

>Not to beat this to death, but I re-downloaded the first messages in the
>thread and reviewed them and have had some other thoughts. Could these
>possibly be monolithic crystal pairs? You might just carefully pull the
>cover off one and see whether the crystal has more than one set of plated
>contacts on each face of the rock.
>
>W4ZCB
>

285. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 12:53:29 UTC
From: "William E. Sabin" <sabinw@mwci.net>
Message-ID: <3C3EE049.5080803@mwci.net>
Source record: 47426
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

William E. Sabin wrote:

> Gary Coffman wrote:
>
>> On Thu, 10 Jan 2002 20:42:55 -0800, "Jim Pennell"
>> <NoSpam@killspam.com> wrote:
>>
>>> "Mark Bell" <bell@blazenet.net> wrote in message
>>> news:u39sj52qbs7k81@corp.supernews.com...
>>>
>>>> What type of SSB generator will produce the best sideband
>>>> suppression, filter or phasing?
>>>>
>>> My Understanding is that phasing systems typically get around 35 - 40 dB
>>> sideband supression if everything is near perfect... The problem is
>>> usually
>>> slight differences in the amplitude and phasing of the two audio
>>> channels.
>>> Well, that, and variation in the RF 90 degree LO splitter that
>>> changes the
>>> RF pahse shift from one end of the band to the other.....
>>>
>>> And, there is some change over time and temperature that usually
>>> degrades
>>> the supression by a few more dB as time goes by.
>>>
>>
>> In theory, a phasing SSB generator can offer perfect opposite sideband
>> suppression.
>> If implemented in analog tech, things are never perfect, so perfect
>> suppression can't be achieved. However, if you do the SSB generation
>> in DSP, then you *can*
>> have everything perfect (at least to the numeric limits of the DSP).
>> Opposite sideband suppression can be at least 90 dB with existing
>> (affordable) DSP tech.
>>
>> Some commerically produced amateur transceivers are now using this
>> method of SSB generation (at a very low IF). There are also a few kits
>> and construction projects for the do it yourselfer. One advantage of
>> using DSP for this is that once
>> you have an I/Q style modulator, you can use it to generate *any*
>> arbitrary modulation form (AM, FM, SSB, PSK, FSK, etc) with only a
>> software change.

>>
>> A low IF DSP modulator/demodulator can be built for under $50 in
>> quantity one from off the shelf parts (much cheaper in mass
>> production). It hardly makes sense to spend the money for a crystal
>> filter type SSB modulator today. The filter alone would cost more than
>> the entire DSP subsystem.
>> (Of course you may want a filter anyway, on the receive side of a
>> transceiver, to reduce the required dynamic range of the DSP by
>> suppressing out of passband energy at the input to the DSP. But this
>> filter can be less expensive than the one
>> needed for classic filter/product detector designs, because the DSP
>> can do a lot of the filtering while also doing the demodulation.)
>>
>> Gary
>>
>>
>
> The limitation for SSB on opposite sideband is set by the linearity of
> the power amplifiers. For a conventional amateur rig this limit is about
> 40 to 50 dB below PEP within the audio frequency range of the opposite
> sideband.
>
> Bill W0IYH

The brief comments above need some clarification.
Consider USB. The opposite sideband (LSB)
contains the following:

1) LSB products that are due to the IF filter
response below the carrier frequency. That is, LSB
output from an USB xmtr. My spectrum measurements
show 40 to 60 dB reduction of these products using
a filter-type rig, depending on how far below the
carrier they are.

2) Distortion products generated directly by the
PA. These are not filtered by the SSB filter. The
typical adjacent channel "splatter" generated by a
speech signal is a gross example, but some of it
is present even in a fairly "clean" transmitter.
This is a pseudo-noise output.

3) Wideband white noise created by the amplifier
chain that comes after the SSB filter. Definitely
not negligible.

4) L.O. phase noise with the usual "Xmas Tree"
spectrum shape.

All of these are received within the passband of
an SSB receiver that is tuned to the lower
sideband. This receiver also has reciprocal

mixing due to its L.O. phase noise.

The receiver is *integrating* all of the stuff that is in the LSB within a 2500 Hz bandwidth. The total of all of that is typically in the range of 40 to 50 dB below PEP for a medium performance SSB xmtr, and 50 to 60 dB in commercial xmtrs.

In view of all the sources of garbage in the LSB, an infinite LSB rejection in the SSB generator is not really justified, so far as SSB is concerned.

Chapter 17 of the ARRL Handbook, 1995 or later, also has a discussion of this topic.

Bill W0IYH

286. Re: Simple 30 Meter One Tube Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 12:57:11 UTC
From: k5dh@raytheon.com
Message-ID: <HiB%7.264$kY4.5737@dfw-service2.ext.raytheon.com>
Source record: 47427

I built that transmitter a few years back, and I still have it!
Mine works 80m and 40m and runs a blistering 4 Watts output on
either band.

Pictures on the Home Station page of my web site:

http://www.qsl.net/k5dh

73,
Dean, K5DH

In article <3c3e031b@news.alphalink.com.au>, parkerp@alphalink.com.au says...
>
>The 1973 ARRL H/book had a little tx that used a triode osc / pentode PA
>(6T9?). This overcomes the problem of chirp and high crystal current i
>n
>single stage designs.
>
>Peter
>
>
>"Ji m" <gorf@bellsouth.net> wrote in message
>news:w1N_7.250782$BX4.14159571@e3500-atl1.usenetserver.com...
>> Hello all,
>>
>> I would like to build a 1 tube 10Mhz Transmitter. Anyone have designs
>,
>> plans, Schematics, Ect.. for one with parts not to hard to get, someth
>ing
>> simple, xtal controled?
>>
>> Thanks
>>
>> Jim - KU4QW
>>
>>
>>
>>
>
>

287. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 13:23:30 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0201110523.5479f6db@posting.google.com>
Source record: 47428

"Harold E. Johnson" <W4ZCB@Home.com> wrote in message
news:<nvs%7.41311$LQ1.12673968@news2.nash1.tn.home.com>...
> Not to beat this to death, but I re-downloaded the first messages in the
> thread and reviewed them and have had some other thoughts. Could these
> possibly be monolithic crystal pairs? You might just carefully pull the
> cover off one and see whether the crystal has more than one set of plated
> contacts on each face of the rock.
>
> W4ZCB

Did anyone mention that a Vector Network Analyzer would be the answer
to his original question? It will tell you both the impedance, center
frequency, and passband shape of the filter.

Jim
N8EE

288. Re: How to get low freq quadrature signals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 13:39:46 UTC
From: deyoreo@re.ray.com
Message-ID: <3c3eeaf1.4670921@proxy.res.ray.com>
Source record: 47429

Sorry, I didn't mention this is an analog signal 5 - 160 Khz.
On Thu, 10 Jan 2002 14:26:41 GMT, deyoreo@re.ray.com wrote:

>I need a device that I can input 5 Khz - 150 Khz and output 2
>quadrature signals. Anyone know of such a device?

289. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 13:40:12 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <dbqt3u4ji5sgohlfmhc714d5s4ckjllvhn@4ax.com>
Source record: 47430

Harold:

I'm posting 5 samples to you this morning, marked A through E. (My original 5 samples are numbered 1...5.

Here is what I measured this AM using a GR916 RF bridge. I first adjusted the frequency so that reactance = 0 ohms, which should put me reasonably accurately on the series resonant frequency:

Delta F is zero reactance frequency difference from nominal 13500.000 KHz.

Xtal Rs (ohms) Delta Frequency Hz
1 4.55 -15
2 4.20 -70
3 5.00 +15
4 4.30 +85
5 4.20 +45
A 4.10 -65
B 5.40 -145
C 4.15 -15
D 4.55 -70
E 4.60 +40

I didn't measure Cm, Lm and Ch for A...E.

I haven't checked the signal generator time base recently, so it could be off a few Hz one way or the other.

A check of the 916 bridge against several precision 50 ohm RF loads shows it is within 1% at that resistance.

I disassembled one crystal to check your question. It has one plated contact on each side. These are cold welded crystals, not soldered, so I had to carefully cut the base off with a jeweler's saw.

If you would like, I'll e-mail a photo of the disassembled crystal.

Jack

On Fri, 11 Jan 2002 02:56:19 GMT, "Harold E. Johnson" <W4ZCB@Home.com> wrote:

>Not to beat this to death, but I re-downloaded the first messages in the >thread and reviewed them and have had some other thoughts. Could these >possibly be monolithic crystal pairs? You might just carefully pull the >cover off one and see whether the crystal has more than one set of plated >contacts on each face of the rock.

>
>W4ZCB
>

290. Swapping eCAD files : Wanting to make MW rx .

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 13:49:39 UTC
From: Richard Daventry <newsgps_email@ntlworld.com>
Message-ID: <y2C%7.14081$Hx3.1663750@news11-gui.server.ntli.net>
Source record: 47431

Some homebrewers must use eCAD and produce schematic and netlist files etc to produce PCB layouts.

It's not so simple to do, because eCAD makers tend to arrange file formats specific to their eCAD programs, but do folks ever swap their files, so others can benefit?

I'm interested in building a homebrew MW (Broadcast band) rx where a PCB is available, or in files that I can use in an eCAD program, so I can make my own PCB's that particular way. (I'm wanting to gain experience of using eCAD in production of PCB layouts, but where the schematic and layout has been done already).

291. Help with Homebrew 40 Meter receiver project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 14:57:18 UTC
From: tincansailor@hotmail.com
Message-ID: <3c3efb7c.1727053@news.sacoriver.net>
Source record: 47432

HI.

I hope to build a decent 40 meter receiver (73 Amateur Radio Today/FEB99 by Thomas Duncan). I have the two boards from FAR Curcuits and a very poor photocopy of the article in 73 magazine. I can't really read the schematic.

I have only been able to find a few of the parts locally and so I will have to order over the internet or from catalogs perhaps?

I would appreciate hearing anyone who knows where to buy homebrew parts. And from anyone who has built the receiver. Also need a decent photocopy of the article or schematic.

Thanks in advance for the help. Email is tincansailor@hotmail.com
This is my first homebrew attempt and I am a little bit overwhelmed.

73

Jerry Williams
AA1XX

292. Need Assistance for HF Homebrew Rcvr project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 14:58:06 UTC
From: tincansailor@hotmail.com
Message-ID: <369d8324.1066034@news.sacoriver.net>
Source record: 47433

Hi.

I am trying to get the electronic components together for a 40 Meter receiver (Thomas Duncan - 73 Amateur Radio Today FEB99). I have the two boards from FAR Cuicuits and a very poor photocopy of the article. I can't really read the schematic completely.

I have bought about half the parts locally but am having problems finding the others.

What are the best sources for homebrew parts? And if anyone has built this receiver, PLEASE email tincansailor@hotmail.com with where you obtained parts and any particular things to watch out for, etc., etc. Also, I would very much appreciate a decent photocopy of the article. This is my first homebrew project and I think I may have taken on a little too much.

Thanks and

73

Jerry Williams
AA1XX

293. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 15:00:38 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <a1mumt$ra4n0$1@ID-61331.news.dfncis.de>
Source record: 47434
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Don't forget polyphase shifting networks as opposed to the two-chanel types. They can acheive a much better sideband suppression but there are losses associated with the network. However according to a 1995 QEX article, instead of choosing a single value resistance or capacitance throughout the network, if you vary resistance and capacitances from column to column in the right way it is possible to obtain a flat response. I have built an 8-stage network using 0.1% resistors and capacitors also matched to within 0.1%. The values are calculated according to the QEX article. I have as yet not properly measured the response of the network, but at one frequency (1.8 kHz) looked at so far, the network actually showed a gain of 4dB with the values I used. I plan to use a Huff & Puff stabilised VFO at 56-64 MHz, to divide by 4 for coverage of 160m, 80m, 40m and 20m bands, driving a Tayloe switching detector. My Huff Puff VFO Stabiliser information page is at http://www.hanssummers.com/radio/huffpuff/contents.htm and details of my Huff Puff VFO circuit are at http://www.hanssummers.com/radio/huffpuff/fast/index.htm. At the bottom of this page is a photo of my polyphase network, though I have since then added the Tayloe detector and a 160m bandpass filter.

Hans Summers
http://www.HansSummers.Com

"Jim Pennell" <NoSpam@killspam.com> wrote in message
news:a1lqe2hgf1@slb1.atl.mindspring.net...
> "Mark Bell" <bell@blazenet.net> wrote in message
> news:u39sj52qbs7k81@corp.supernews.com...
> >
> > What type of SSB generator will produce the best sideband
> >suppression, filter or phasing?
> >
>
>
> My Understanding is that phasing systems typically get around 35 - 40 dB
> sideband supression if everything is near perfect... The problem is
usually
> slight differences in the amplitude and phasing of the two audio channels.
> Well, that, and variation in the RF 90 degree LO splitter that changes the
> RF pahse shift from one end of the band to the other.....
>
> And, there is some change over time and temperature that usually
degrades
> the supression by a few more dB as time goes by.
>

> The audio tends to sound 'better' since it isn't filtered to be as
narrow
> a bandwidth as most crystal filter rigs.
>
> ==========
>
> A good crystal filter type transmitter usually has better sideband
> supression and it also doesn't change much with time and temperature.
It
> also lends itself to making a transciever more easily since the filters
and
> oscillators are already in place.
>
>
>
> Jim Pennell
> N6BIU
>
>
>

294. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 15:12:09 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <ivvt3u86muustl0cdpaj0u3rkp1a1lnj99@4ax.com>
Source record: 47435

Jim:

I have a scalar network analyzer and have a good view of the center
frequency and passband shape of the filter.

The question started out concerning the spurious mode in both the 2
cyrstal filter and in the crystals themselves. It then drifted into
"what is the series R of the crystal."

the original question remains "is there a way to remove the spurious
mode in the resulting filter?"

Jack K8ZOA

On 11 Jan 2002 05:23:30 -0800, jim.bolinger@lintek.aeroflex.com (JLB)
wrote:

>"Harold E. Johnson" <W4ZCB@Home.com> wrote in message
news:<nvs%7.41311$LQ1.12673968@news2.nash1.tn.home.com>...
>> Not to beat this to death, but I re-downloaded the first messages in the
>> thread and reviewed them and have had some other thoughts. Could these
>> possibly be monolithic crystal pairs? You might just carefully pull the
>> cover off one and see whether the crystal has more than one set of plated
>> contacts on each face of the rock.
>>
>> W4ZCB
>
>Did anyone mention that a Vector Network Analyzer would be the answer
>to his original question? It will tell you both the impedance, center
>frequency, and passband shape of the filter.
>
>Jim
>N8EE

295. Re: How to get low freq quadrature signals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 15:29:17 UTC
From: Mike <m.j.willis@rl.ac.uk>
Message-ID: <a1n0cm$qa0@newton.cc.rl.ac.uk>
Source record: 47436

<deyoreo@re.ray.com> wrote in message
news:3c3eeaf1.4670921@proxy.res.ray.com...
> Sorry, I didn't mention this is an analog signal 5 - 160 Khz.
> On Thu, 10 Jan 2002 14:26:41 GMT, deyoreo@re.ray.com wrote:
>
> >I need a device that I can input 5 Khz - 150 Khz and output 2
> >quadrature signals. Anyone know of such a device?

What do you mean by quadrature, for every possible instantaneous phase amplitude vector or is there a single carrier that varies as you tune something? If it is the former it would be tricky considering the bandwidth ratio. You might consider DSP. The latter can be solved with a PLL.

Typically at higher frequencies, you could use a 90 degree hybrid splitter.

There is a way to get an arbitrary phase shift with constant amplitude. First make an inverter to you have two signals 180 degrees out of phase (you could do it with a transformer or an active circuit) , sum these, one through a capacitor and one through a variable resistor and you get a variable phase shift. Problem is, the phase shift varies with frequency so if you don't want to adjust the circuit depending on frequency, you will need to incorporate some form of zero phase shift frequency dependent resistor, an FET perhaps.

296. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 15:57:50 UTC
From: "Harold E. Johnson" <W4ZCB@Home.com>
Message-ID: <2YD%7.43013$LQ1.13100122@news2.nash1.tn.home.com>
Source record: 47437

>
> Did anyone mention that a Vector Network Analyzer would be the answer
> to his original question? It will tell you both the impedance, center
> frequency, and passband shape of the filter.
>
> Jim
> N8EE

Yes, I did.

W4ZCB

297. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 16:01:57 UTC
From: "Harold E. Johnson" <W4ZCB@Home.com>
Message-ID: <V%D%7.43026$LQ1.13102396@news2.nash1.tn.home.com>
Source record: 47438

> I'm posting 5 samples to you this morning, marked A through E. (My
> original 5 samples are numbered 1...5.

Very good, call book address is fine and I'll take good care of them.
>
> I disassembled one crystal to check your question. It has one plated
> contact on each side. These are cold welded crystals, not soldered, so
> I had to carefully cut the base off with a jeweler's saw.
>
> If you would like, I'll e-mail a photo of the disassembled crystal.

No need, I know what the innards of a crystal look like. Just a shot in the dark since most monolithics have a third lead for the coupling plates. I have seen some though that used the case itself for that lead and thought you might have tumbled onto a bunch of those particularly since they were such a good buy.

I'll be interested in trying a couple out. Have you checked on the harmonic content of your signal source? About the only thing I can think of that would lead to such a low Rs reading other than just plain coupling around the crystal.

Regards
W4ZCB

298. Sweedish Roller Rectifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 16:04:39 UTC
From: troglodite@aol.com
Message-ID: <20020111110439.05437.00001570@mb-mq.aol.com>
Source record: 47439

Greetings,

Has anyone ever heard of this device?

299. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 17:49:40 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <t19u3ucsn71sjsc9m4app82jb84tjip1dg@4ax.com>
Source record: 47441

Harold:

I used a DDS-based function generator for the signal source, since it has resolution to 0.01 Hz. Its harmonic performance and spurious performance in general isn't all that good, but my bridge measurements used a Racal 6790/GM general coverage receiver for the null detector, so source harmonic shouldn't be an issue.

Harmonic or spurious could be an issue with the HP3400A meter used as a detector when I used a trimpot substitution, since it's broadband up past 20 MHz. But, I got the same results when I used a spectrum analyzer as the detector. (The 3400A is easier to see a fraction of a dB change compared with the 1 dB/div SA display.)

So, it will be interesting to see how much difference there is between my measurements and what you find.

Jack K8ZOA

On Fri, 11 Jan 2002 16:01:57 GMT, "Harold E. Johnson" <W4ZCB@Home.com> wrote:

>> I'm posting 5 samples to you this morning, marked A through E. (My
>> original 5 samples are numbered 1...5.
>
>Very good, call book address is fine and I'll take good care of them.
>>
>> I disassembled one crystal to check your question. It has one plated
>> contact on each side. These are cold welded crystals, not soldered, so
>> I had to carefully cut the base off with a jeweler's saw.
>>
>> If you would like, I'll e-mail a photo of the disassembled crystal.
>
>No need, I know what the innards of a crystal look like. Just a shot in the
>dark since most monolithics have a third lead for the coupling plates. I
>have seen some though that used the case itself for that lead and thought
>you might have tumbled onto a bunch of those particularly since they were
>such a good buy.
>
>I'll be interested in trying a couple out. Have you checked on the harmonic
>content of your signal source? About the only thing I can think of that
>would lead to such a low Rs reading other than just plain coupling around
>the crystal.
>
>Regards
>W4ZCB

>

300. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 18:48:16 UTC
From: n7ws@yahoo.com
Message-ID: <3c3f12dd.90174286@news.triconet.org>
Source record: 47440

On Thu, 10 Jan 2002 22:21:05 GMT, Jack Smith <jsmith@mnsinc.com> wrote:

|This rambles a bit, but there's a question or two that require some
|setup.

I will ramble a bit too and interject random thoughts
|
|A few weeks ago, I bought 300 crystals (13.500 MHz) for a few cents
|each, with the thought that I would try my hand at a few crystal
|filters.

These are probably not high quality rocks
|
|I measured the average crystal parameters (using the technique
|suggested by Wes Hayward) as:

Is this method the one described in "Introduction to Radio Frequency Design"?
|
|Rs = 1.92 ohms
|Lm = 4.3048 mH
|Cm = 32.321 fF
|Ch = 6.2 pF

As others have stated, Rs looks low.
|
|Using these parameters, I designed a 2 crystal and a 4 crystal filter
|1 Khz bandwidth, Butterworth, and breadboarded them today. (For easy
|measurement, I also built an L matching network at each end to match
|to 50 ohm test equipment.) Also ran some SPICE simulations on the
|designs and all seemed OK.

Are these lattice or ladder filters?
|
|First, the 2 crystal filter. I measured the 1 KHz response, and it
|looked almost like the SPICE simulation, 3 dB BW 910 Hz, a little
|tight, but not so bad. Passband looked just like it should, nice top.
|Ultimate rejection > 80 dB even with breadboard layout. Center
|frequency (minimum VSWR and also minimum loss) 13500.520 KHz, loss 2.2
|dB, return loss 23 dB when filter output terminated with a good 50 ohm
|load.
|
|I then put the filter on my network analyzer (an old HP8754A) and
|swept it out, using an outboard FM signal generator for better
|performance in narrow sweeps. Sure surprised me when I found a second
|passband, with a 3 dB bandwidth of about 200 Hz width (3 dB points),
|at 13578.880 KHz. The second passband was only 30 dB down.

|
|I then swept a crystal by itself, and in addition to the normal series
|and parallel resonance points around 13500 KHz, I found two more
|series/parallel resonance points, up around the area where I found the
|second passband, between 75 and 100 KHz above 13500 KHz.

Yep.
|
|I concluded that the spurious passband is the passband caused by these
|secondary series/parallel resonance points coinciding.

Probably. Strictly speaking, "spurious" response is incorrect, these are real responses. In crystal spec terminology, these are called "unwanted" modes (although some manufactures do call them spurious). They result from (among other things) problems in processing the quartz blanks.

In the old MIL specs, (MIL-C-3098, later MIL-PRF-3098) states, "all unwanted modes shall have a resistance that exceeds two times the main mode resistance."

So, the presence of these modes is anticipated.

Unfortunately, they are most troublesome in filter applications. In oscillators, the limiting action tends to suppress them, if you can get the damned thing running on the correct resonance in the first place :)

|
|Question: Anyway to kill this spurious? I have an application that I
|would like to use a 2 crystal filter in.

I would think this would be difficult, if not impossible.

|
|I then built the 4 crystal version, and no trace of a spurious
|response. All performs pretty much in accordance with the theory and
|SPICE simulations. I'm guessing that the spurious frequencies show
|greater deviation than the fundamental resonance points and that my
|first two crystal filter just had an unfortunate alignment of spurs.
|I'll run some more detailed individual crystal measurements tomorrow
|and try a different set of crystals in the two crystal filter, but I
|wanted to see if anyone had some experience in this area and could
|point me in the right direction.

Another thing that can bite you is the fact that crystal parameters are drive level sensitive. You need to make some measurements with different drive powers and see whether your answers are consistant.

When I was still employed, I developed a measurement technique using an H-P 3577 VANA and homegrown software (HP Basic on a 9836). The '3577 could sweep not only frequency but output power. One test I implemented would start measuring at very low drive (-40 dBm as I recall). The Fs, ESR, and unwanted modes would be measured and then the drive increased by a desired increment and the parameters would be remeasured. This process would be repeated until the max permited crystal dissipation was reached and then *the process would be reversed*, i.e.,

the power would be stepped down in the same increments.

If the data were plotted; ESR, Fs, etc. v. drive level, often times a hystersis would be noted. Starting at low drive, the ESR would start off high and decrease to a minimum (sometimes again increasing at higher drive) and then when the power sweep was reversed, the ESR would stay at a low value all the way back down the power sweep. These are known as "lazy" crystals.

One believed cause of this is that impurities that have settled on the crystal blank during non-operation are driven off once the crystal starts vibrating. The ESR is primarily due to the mechanical friction so the additional "loading" of the impurities causes it to be greater.

The kicker in this is that the unwanted modes don't necessary behave the same as the primary modes (particularly over temperature). Fun huh?

Another problem with extracting the motional parameters is that the shunt capacitance distorts the series resonance curve. The true series resonant frequency (defined as zero phase shift) is not the same as the minimum impedance frequency.

Using software and the built-in trace math capability of the '3577 I would measure the shunt C at a frequency far removed from resonance and then "tune it out" with a mathematical "shunt" inductor. Over a narrow frequency range near resonance the slope of reactance v. frequency was now linear and can be determined by taking a few samples. The motional parameters could then be calculated.

This work was done back when the only PC's in the facility were on the managers' desks. Therefore most of the data processing was done in the instrument. Today, I'd probably do it in Mathcad or Excel (although the latter is a mess with complex numbers)

I found it easier to measure the crystals as a one-port, rather than two-port device. I could then do a full open-short-load calibration with the fixture in place. Most of the crystals I tested were either TO-5 or surface mount and I used empty packages to build cal standards.

Some good references are:

MIL-PRF-3098 is at:

http://www.dscc.dla.mil/Programs/MilSpec/listdocs.asp?BasicDoc=MIL-PRF-3098

EIA-512 "Standard Methods for Measurement of the Equivalent Elecrical Parameters of Quartz Crystal Units, 1 KHZ to 1 GHz.", published by the Electronic Industries Association. (www.eia.org) This standard is incorporated by reference into the MIL standard.

A wealth of info at:

http://www.corningfrequency.com/features.htm

"Good EMI/RFI Performance Begins with Crystal Test", Electronics Test Magazine, April 1988 pp 64-69.

"An Advanced 5-Hz-to-200-MHz Network Analyzer", Hewlett-Packard Journal November 1984.

End of ramble.

Wes N7WS

301. Re: Front Panel Layout software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 21:28:31 UTC
From: "Sverre Holm (LA3ZA)" <la3za@qsl.net>
Message-ID: <3OI%7.201$8e6.6236@news4.ulv.nextra.no>
Source record: 47443

I have used WB8CR's program and I can recommend it. It is very simple to use
and gives excellent results. I have some examples on my homepage:
www.qsl.net/la3za. Look under Homebrew and K2.
Sverre Holm, LA3ZA
Asker, Norway (59.8N, 10.4E)

xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:u3pntfgsfj5a24@corp.supernews.com...

> Phil
>
> I have a freeware program at http://hfradio.org/wb8rcr
>
> It is available for Linux or Windows command line. Source is available if
> you want to compile it for another operating system.
>
> As a command line utility, it's a little clunky, nothing at all fancy, but
> you can lay out a decent panel pretty quickly, which is the objective
after
> all.
>
> ..
>
> "Philip de Cadanet" <phil@invest.fsbusiness.co.uk> wrote in message
> news:Q69MOEAihCP8Ewww@invest.fsbusiness.co.uk...
> > Can anyone recommend any of the above and a possible source?
> >
> > Win based please.
> >
> > Tnx
> >
> > Phil G4ZOW
> >
>
>

302. Re: Help with Homebrew 40 Meter receiver project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 22:13:45 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3C3F62DE.BB322DA@gte.net>
Source record: 47444

tincansailor@hotmail.com wrote:

> HI.
>
> I hope to build a decent 40 meter receiver (73 Amateur Radio
> Today/FEB99 by Thomas Duncan). I have the two boards from FAR
> Curcuits and a very poor photocopy of the article in 73 magazine. I
> can't really read the schematic.
>
> I have only been able to find a few of the parts locally and so I will
> have to order over the internet or from catalogs perhaps?
>
> I would appreciate hearing anyone who knows where to buy homebrew
> parts. And from anyone who has built the receiver. Also need a
> decent photocopy of the article or schematic.
>
> Thanks in advance for the help. Email is tincansailor@hotmail.com
> This is my first homebrew attempt and I am a little bit overwhelmed.
>
> 73
>
> Jerry Williams
> AA1XX

F.A.R. will supply you with the article for $1.50.

Try Dan's Small Parts, DigiKey and Mouser.

Dale W4OP

303. Re: Quadrature DDS board available

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 22:54:58 UTC
From: Kc7eip <kc7eip@shaw.ca>
Message-ID: <Xns9193962C8BB11kc7eipshawca@24.64.223.211>
Source record: 47445
Cross-posted to: aus.electronics,rec.radio.amateur.homebrew,sci.electronics.design

I would not be opposed to a e-mailed recap of the qst article either..

304. Re: How to get low freq quadrature signals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-11 23:18:48 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <a1nrs7sos1@slb7.atl.mindspring.net>
Source record: 47446

Deyoreo:

[snip]
<deyoreo@re.ray.com> wrote in message
news:3c3eeaf1.4670921@proxy.res.ray.com...
> Sorry, I didn't mention this is an analog signal 5 - 160 Khz.
> On Thu, 10 Jan 2002 14:26:41 GMT, deyoreo@re.ray.com wrote:
>
> >I need a device that I can input 5 Khz - 150 Khz and output 2
> >quadrature signals. Anyone know of such a device?
[snip]

The "device" of which you speak, is called a wideband 90 degree phase splitting network. a.k.a. Hilbert Transformer.

In theory such a "perfect" device is impossible to implement precisely since it implies a certain non-physicality. However for enough money one can approach the ideal phase splitter closely.

An approximation to the 90 degree phase separation can be achieved within specified error tolerances... e.g. phase separation of 90 degrees +/- and error of epsilon degrees, over any band of interest. The "cost" of such devices goes up *very* quickly as epsilon approaches zero, and as the bandwidth becomes wider! The looser the phase deviation spec and the narrower the band over which you want matching the better off you are!

You have not given any specifications in your posting on the degree of matching required over your band. But... I can say that your desired bandwidth, 5 - 150kHz is within the realm of possibilities with today's technologies, however, it is on the *extremely* wide side, in terms of relative bandwidths, for such devices. In other words, you'r probably not talking amateur $$$, but professional stuff because of the prices...

Unfortunately... there are no such devices, that I am aware of, which are "ready-made" for your frequency range. In fact most of the commercial off-the-shelf phase splitting devices, which were generally simple but precision matched R-C networks for voice-band/SSB generator applications, went out of prodcution many years ago, e.g. B&W, etc...

It is possible to design and build such a device, but... that is a non-trivial exercise, and definitely requires computer aided design tools, which are not widely available since there is so little call for such an application!

Since you have not elaborated on your problem, I will assume that you are looking at one of two scenarios...

A completely analog phase splitter, or a completely digital phase splitter

The latter means that you have already assumed/underwritten, all the costs of A/D converters, etc... if so then there may be some hope in coding your own DSP algorithm for a wideband Hilbert Transformer.

It's probably easier for a non-specialist, who is a DSP jockey, to design and implement a "digital" phase splitting device, known to the DSP filter guru's as a Hilbert Transformer, since Hilbert Transformers have well known DSP implementations, that can almost be "transplanted" into a programmable DSP engine. However if you are seeking accuracy of less than 1 degree peak to peak error across that 5 - 150 Khz band, the floating point MIP's that such a DSP algorithm will chew up will most likely dwarf the rest of your application. Count the cycles and check it out before committing!

If you are after an analog device, well I am afraid that... you are in for an even tougher time... The design of precise wide band analog phase splitters is almost a black art (Such a design involves first solving mathematical approximation problem using very advanced optimization techniques, and then the implementation requires advanced network synthesis techniques to implemtent accurate high order matched all-pass networks, either passive or active implementations, using all-pass LC lattice networks, or active RC all-pass networks.) In my experience I have only ever seen such networks developed for advanced surveilance radar video applications, and for advanced passive sonar front end applications, both of which were/are related to military sensing technology. Not cheap! Such technologies and methodologies are known only to a very few practicioners around the world, and they have developed their own proprietary computer aided design tools to do so, for one or two military sponsored programs. And so... unless you have big bucks to spend... and know who/where to consult with, you'r probably out of luck. You'l have to do it yourself.

And so... unless your design has *very very very* lax specifications on phase accuracy... I am afraid to say that your project might be out of reach.

Sorry,

--Peter K1PO
--Cary, NC

305. 2.4ghz bi-directional pre-amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 00:45:40 UTC
From: scooter <scooter9@offworld1.net>
Message-ID: <8GL%7.194$w67.25351@cletus.bright.net>
Source record: 47297

Does anyone know of a kit for this? This is for my wireless modem made by linksys.

Thanks,

Chris
KB8ZHW

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.313 / Virus Database: 174 - Release Date: 1/2/02

306. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 01:35:47 UTC
From: Gary Schafer <gschafer@mediaone.net>
Message-ID: <3C3F9252.A8B3F5B9@mediaone.net>
Source record: 47299
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

"William E. Sabin" wrote:

> >
> >
> > The limitation for SSB on opposite sideband is set by the linearity of
> > the power amplifiers. For a conventional amateur rig this limit is about
> > 40 to 50 dB below PEP within the audio frequency range of the opposite
> > sideband.
> >
> > Bill W0IYH
>
> The brief comments above need some clarification.
> Consider USB. The opposite sideband (LSB)
> contains the following:
>
> 1) LSB products that are due to the IF filter
> response below the carrier frequency. That is, LSB
> output from an USB xmtr. My spectrum measurements
> show 40 to 60 dB reduction of these products using
> a filter-type rig, depending on how far below the
> carrier they are.

It depends on how far out from the carrier you look. Usually the carrier is set at around 20 db down the filter slope. So at low frequencies, if the audio response is not limited, the opposite side band will be down only 20 db near the carrier. As you go out, higher audio frequency, the suppression gets better.

>
>
> 2) Distortion products generated directly by the
> PA. These are not filtered by the SSB filter. The
> typical adjacent channel "splatter" generated by a
> speech signal is a gross example, but some of it
> is present even in a fairly "clean" transmitter.
> This is a pseudo-noise output.

I assume that you are referring to 3rd order IM products here.

>
>
> 3) Wideband white noise created by the amplifier
> chain that comes after the SSB filter. Definitely
> not negligible.

This should be very low. In band noise, through the filter is much higher.

>
>
> 4) L.O. phase noise with the usual "Xmas Tree"
> spectrum shape.

Should be in the area of 80 db down.

>
>
> All of these are received within the passband of
> an SSB receiver that is tuned to the lower
> sideband. This receiver also has reciprocal
> mixing due to its L.O. phase noise.

This has nothing to do with the transmitter products.

>
>
> The receiver is *integrating* all of the stuff
> that is in the LSB within a 2500 Hz bandwidth. The
> total of all of that is typically in the range of
> 40 to 50 dB below PEP for a medium performance SSB
> xmtr, and 50 to 60 dB in commercial xmtrs.
>
> In view of all the sources of garbage in the LSB,
> an infinite LSB rejection in the SSB generator is
> not really justified, so far as SSB is concerned.
>
> Chapter 17 of the ARRL Handbook, 1995 or later,
> also has a discussion of this topic.
>
> Bill W0IYH
>

As a side note, a phasing type generator will have products show up on the opposite side band from 2nd order distortion products in the audio. 3rd order products do not show up on the opposite side band but do on the wanted side band. I think I have that right.

73
Gary K4FMX

>
>

307. Re: NEW TUBE Forsale ! to the serious Amp Builder !

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 01:37:11 UTC
From: dunnt@its.caltech.edu
Message-ID: <dunnt-1101021737260001@dhcp-40-141.caltech.edu>
Source record: 47298

In article <a1kl1i$9et$1@woodrow.ucdavis.edu>, Skipp would like Al to keep his word <skipp@pilot.ucdavis.edu> wrote:

Hello again Al Al's calls VE7PTT, VA7TR phone 1-[250] 563-5006

Add me to the list of those who have not been piad. Two Vacuum variables ship to him and no payment recieved. Many emails and promise of payment after I called him on phone, but no payment. 12/99 was when I spoke with him on phone.

Tom

>Hello Al,
>
>How about sending me the replacement Vacuum Relay you promised over a year
>ago, or my Money back? I replied and sent Emails to you numerous times
>over the last year and you just ignore me. I've got all your promise to
>replace or refund Emails on archive if you deny it.
>
>So far, your word is not good to me. When you resolve our deal, I'll be
>happy to post that you did.
>
>I'll be waiting...
>skipp
>skipp@pilot.ucdavis.edu
>
>: A.R.Fallas <alishome@uraxis.com> wrote:
>: I purchased the following with the Intention of Building up
>: a second large HF Amplifier !
>: The Project has been cancelled, and therefore offered
>: to the serious Builder !
>
>: New in Eimac Box YC-243=3CX6000A7 Triode
>: New 80amp/240v Peter Dahl Fil. Tranny
>: New Chimney
>: New Peter Dahl Filament Chokes
>: Complete Package Price=$1200.00
>: The tube alone retails for this Price !
>: Buy the TUBE and the rest is free!
>
>: * The nice thing about this New Tube is the Mounting aspect!
>: No Socket is required , the Grounded + Grid ring , is
>: the "Flange mount" and the Chimney fits over the Tube
>: Its that Simple !
>

>: **NOTE*** I will split the shipping etc.!
>
>: 73,s to ALL AL

308. WTB: 3 piece mast/guy wire clamps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 03:09:31 UTC
From: k9sqg@aol.com
Message-ID: <20020111220931.14694.00000879@mb-bj.aol.com>
Source record: 47300

Need some guy wire clamps typically used with TV antenna installations. They are the three piece style that attach around the mast. Seems they are out of production and aren't sold at Radio Shack, Lowe's, Home Depot, Wal-Mart, K-Mart, etc. Any leads would be appreciated.

73s,

Evan

309. Re: Passive LC filter design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 04:39:45 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C3FBE11.FFCF7D19@ieee.org>
Source record: 47301

Peter,

Thank you for the reply.

I am doing this for the love of it to be sure.

I want to understand the math.... that gets all the way to the component tables.

I am making great progress.

The microwave text I have started from was the first book that I had ever seen that spoke to filter synthesis.... I bought it sight unseen because I wanted to learn more about microwave circuits.

I'll check out your links and references, thank you. and maybe hit you up with a few questions.

Kindest regards,

Clyde

"Peter O. Brackett" wrote:

> Clyde:
>
> As several postings to this thread have noted, filter design, even "passive
> LC" filter design is an extensive
> field and it can occupy from at least a couple of years up to a lifetime to
> "master" the art. Given a very
> thorough EE level background.
>
> A microwave textbook however is probably not the best place to start!
>
> IMHO... filter design is one of the most rewarding engineering design
> methodologies to study since it encompasses
> all aspects of engineering design, from deep mathematical theory to
> practical implementation issues all in an
> elegant framework spanning the complete range of design issues from
> requirements and specifications on up
> to implementation, practical construction and manufacturability.
>
> That said, and since... most cannot dedicate a lifetime to study this art
> and need immediate design solutions,
> you will find that for "most" applications encountered by the vast majority
> of basic design problems, there are
> readily available a number of "cookbooks" from which standard designs can be

> easily extracted.
>
> In particular for the simple "all-pole" designs, there are extensive
> tabulations of LC values available.
>
> In fact, for some particular well known all-pole approximations (e.g.
> Butterworth - a.k.a maximally flat, and,
> Chebychev - a.k.a. equiripple) there are several elegant but extremely
> simple explicit closed form formulae for
> the element values of the corresponding LC ladder filters. The theory
> behind these beautiful formulae is very
> deep, and their derivation involves mathematics beyond the ken of most
> graduate engineers, but the formulae
> are *VERY* simple.
>
> I'll post some references here below which include something on the explicit
> formulae plus a lot of standard
> cookbook tabulations:
>
> The so-called all-pole passive LC designs are relatively simple. They,
> have no finite, non-zero transmission zeros.
> All of their branches or arms are simple L or C elements in the low pass
> case. All of the transmission zeros, or
> "loss-poles" as the guru's call them, of all-pole low pass filters occur at
> infinite frequency.
>
> Here is the *amazingly* simple formula, due to Bennett, for the the values
> of the elements of the matched
> Butterworth low pass filter. Your average pocket calculator can generate
> the values for very high order filters in but
> a few moments, if you have a steady hand!
>
> Ta da....
>
> Am = 2*sin((2m-1)*Pi/2*N)
>
> Where N is the "order" of the filter (i.e. the total number of L's and C's),
> and...m are the element numbers from 1 to N,
> with Pi = 3.1416... according to the ancient Greeks, and sin being the sine
> function, with Am being the value of the
> element (L in Hy for m odd and for, C in Fd for m even). Of course this is
> a normalized Butterworth filter with passband
> cutoff at w =1 (Omega = 1 rad/sec)and termination impedances of 1 Ohm, and
> so the values would have to be
> de-normalized as usual .
>
> There are several other similar simple formulae for Chebychev and other
> filters...
>
> I am always amazed that these simple formulae for passive LC filter design

> are not more widely known and used...
> ... too easy I guess!
>
> More advanced designs with finite, non-zero transmission zeros, which offer
> much higher stopband supression than
> all-poles, are often called Elliptic function, Cauer parameter, or
> Darlington parameter, filters. The name Elliptic
> comes from the fact that the Elliptic Integrals are used in the
> approximation stage of the development of such filters.
> The Elliptic functions are sort of like the trigonometric functions. That
> is they are periodic like the sinusoids, but have
> the amazing property that they are periodic in two dimensions, not just one!
> Hence they can be used to generate
> funtions/curves with equirpple behavior in two bands. The passband and the
> stopband! BTW... Cauer was a
> German engineer and Darlington was an American engineer who simultaneously
> but separately developed the theory
> for the Elliptic function filters.
>
> If you are interestd in pursuing this filed, it is well worth the effort in
> terms of it's intellectual rewards, however, it's
> not a study that will pay millions $$$ for your extensive study efforts.
>
> Study filter design for the love of it! Heh, heh. Otherwise use the
> cookbooks!
>
> I'd copy the pages on explicit formulae from Weingerg referenced below if I
> wanted the best pasive LC cookbook.
> With those few formulae on a page or two, and a modern pocket calculator you
> can easilybvbe a "passive LC filter
> guru" and amaze all of your friends...
>
> Here's some key references, culled from my own library on passive LC filter
> design, to get you started:
>
> The classic on the whole design methodology is:
>
> 1. Rudy Saal, and E. Ulbrich, "On the Design of Filters by Synthesis", IRE
> Trans., Vol CT-5, pp. 284-327, Dec. 1958.
>
> A neat round up of the most amazing history of this field by one of the
> "greats" is:
>
> 2. Anatoly I. Zverev, "The Golden Anniversary of Electric Wave Filters",
> IEEE Spectrum, Vol. 3, pp. 129 - 131, March 1966.
>
> Zverev also has published an extensive tabulation of filters by their
> element values:
>
> 3. Anatoly I. Zverev, "Handbook of Filter Synthesis", John Wiley, New

> York, 1967.
>
> For an extensive tabulation of all kinds of filters by their mathematical
> parameters, poles and zeros, see:
>
> 4. Erich Christian and Egon Eisenmann, "Filter Design Tables and Graphs",
> John Wiley, New York, 1988.
> (Find it in your nearest technical library on the shelves at
> TK7872.F5C5)
>
> For many simple explicit formulae of LC ladder filters, and some background
> on their derivation see Weinberg, pp. 651-659,
> there is *amazing* stuff in there, write down those formulae and keep them
> in your shirt pocket!!! :
>
> 5. Louis Weinberg, "Network Analysis and Synthesis", McGraw-Hill, 1962.
> (Find it in your nearest technical library shelved at call number
> TK3226.W395)
>
> Weinberg also has plenty of tabulations including some unique ones for
> "pre-distorted" designs that take into account
> element value losses..
>
> For a lot of very high level practical stuff on filter design, including
> transformations to get "nice" element value ranges,
> some neat stuff on crystal filters, and some more tabulations see...
>
> 6. DeVerl S. Humphreys, "The Analyisis, Design and Synthesis of Electrical
> Filters", Prentice-Hall, 1970.
> (Find it in your nearest technical library, shelved at call number
> TK782.F5H84)
>
> And last but not least for the "best" practical explanation of it all, heh,
> heh...
>
> 7. Adel S. Sedra, and Peter O. Brackett, "Filter Theory and Design: Active
> and Passive", Matrix Publishers,
> Champaign, 1978. (Shelved at call number TK7872.F5S42)
>
> Enjoy!
>
> Best,
>
> --Peter K1PO
>
> "Clyde R. Shappee" <cshappee@ieee.org> wrote in message
> news:3C392682.78CA8E3C@ieee.org...
> > I am working through the math involved in Passive LC filter design.
> >
> > I have books that give tables of component values on how to do this, all

> > normalized to 1Hz. I am fine with that. All the tables are for designs
> > with no Zeros in the transfer function; they are "All Pole" designs.
> >
> > In my text on microwave circuit design, it talks about filter synthesis
> > and the designs have Zeros in the transfer function. Obviously, this
> > means that the filter has a capacitor on its input.
> >
> > What is the real difference? Why should I care? How do I use the
> > methods in the microwave book to synthesize a filter that is all pole?
> >
> > Any help or direction to literature would be greatly appreciated.
> >
> > Clyde
> >
> > KA1CRV
> >

310. Please visit..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 05:03:03 UTC
From: Zdravko <zdravko.francekovic@tel.hr>
Message-ID: <a1ofst$4sgs$1@as201.hinet.hr>
Source record: 47302

http://free-zg.hinet.hr/Frenki

311. Re: HP 5385A vs 5386A??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 06:02:43 UTC
From: Rick Karlquist <richard@karlquist.removethis.com>
Message-ID: <7kQ%7.3355$Tq.21661@rwcrnsc54>
Source record: 47303

The 5386 has a very expensive prescaler assembly installed
in an otherwise mundane counter chassis. Because of this,
there would be an incentive to cannibalize any nonrepairable
5386 to get the prescaler (assuming it was still good). So you
shouldn't assume it is going to be easy to get the prescaler.
If you do, I would suggest that you simply use it externally
to drive any suitable counter.

The 5385 used a divide by 10 prescaler while the 5386 used
a divide by 4 or 8. Therefore, you are not going to be able
to get the counter to read the actual frequency (you will have
to do the math yourself). And forget trying to modify the
firmware. You might be able to do something wierd like
using a 12.5 MHz external timebase to get it to read right.

The 5386 prescaler is vastly superior to any other prescaler
appearing in an HP counter. The one in the 5385 is actually
fairly finicky; for example, it was tested on the production line with an
HP 8660 synthesizer, but required a high pass filter to prevent
the high noise floor of the 8660 from corrupting the measurements.

BTW, I worked for the HP Santa Clara Division (where counters
were made) for 19 years and was project manager for the 5334B
counter. Now with Agilent Labs in Palo Alto.

Rick Karlquist N6RK

"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:u3pp8jmq38fjb4@corp.supernews.com...
> the HP 5385A is good to 1.3 GHZ and the 5386A is good to 3.0 GHz. Are the
> units the same except for a prescaler? I have the 5385A and was wondering
> if it could be upgrade with good parts from a defunct 5386A.
>
> tnx
> hank wd5jfr
>
>

312. Re: Need 19KHz Xtal

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 06:06:36 UTC
From: "Michael A. Terrell" <michaelaterrell@netscape.net>
Message-ID: <3C3FD219.54595783@netscape.net>
Source record: 47304

Michael Black wrote:
>
> On Wed, 26 Dec 2001, Clyde R. Shappee wrote:
>
> > Yes, I did think of that, but the tolerances involved in the final signal are +/- 1
> > Hz.
> >
> > This crystal would have to be very pullable, and the reality of this type of part is
> > that it is not.
> >
> > The 38.00053MHz oscillator and associated divide chain yields an accuracy of nearly
> > that unadjusted.
> >
> > Clyde
> >
> I thought the crystals in watches were 38.768KHz. Certainly in digital
> watches, it's not going to be exactly 38KHz, because it's easier to
> use binary counters, and they won't divide down evenly.

Watch crystals are 32768 Hz so a simple 14 bit binary counter can
generate a 1 Hz clock. Your figure is 6 kHz high.

313. With just a DVM and Inductance meter...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 06:46:30 UTC
From: braincambre500@yahoo.com
Message-ID: <85a87c6c.0201112246.40014101@posting.google.com>
Source record: 47305

Hello all,

I would like to know this:

If a person took out all of the IF transformers in a salvaged AM/FM radio, is is possible he could find out which can would be the 455 kHz IF transformer by just using a DVM and an inductance meter? Color slugs sometimes don't agree with said frequencies.

a friend, Patrick

314. Re: With just a DVM and Inductance meter...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 07:05:05 UTC
From: Your Friend Bill <"Remove The NO In The Reply To Address"@coqui.net>
Message-ID: <3C3FE021.DBC6196D@coqui.net>
Source record: 47306

Patrick wrote:
>
> Hello all,
>
> I would like to know this:
>
> If a person took out all of the IF transformers in a salvaged AM/FM
> radio, is is possible he could find out which can would be the 455 kHz
> IF transformer by just using a DVM and an inductance meter? Color slugs
> sometimes don't agree with said frequencies.
>
> a friend, Patrick

Thats a very tricky question. There's a number of rules of thumb that would give results. I forget all the typical colors but if you sort them out in a particular radio you will probably fall upon a scheme. Spotting a 455kc IF xfmr in a boombox is child's play. If your intention is to jap one for another project, it is often simpler to start from scratch and mail-order one that is guaranteed to have specs to your liking so as to limit the tinkering and frustration time Cost should be less than a pound/euro/buck.

-Bill

315. January Specials from www.sauderelectronics.com

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 07:22:14 UTC
From: Ben Silverman <ben@everyoneflydotcom>
Message-ID: <Xns9194176872EDEbeneveryoneflycom@209.249.90.101>
Source record: 47307
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

Greetings,

I'd like to thank all of you who visted the website(http://www.sauderelectronics.com) and ordered, what great support the online community has shown for the site and its products. To answer many of you: Yes, the prices on the items are not introductory, they will remain the same as long as our customers(you) continue your great support. I'd specifically like to thank Frank Leaf who was extremely helpful in our online endeavor and volunteered to help with website improvements.

So, with no further ado, I announce our January USENET only specials! These specials are not posted anywhere else(except the website) and were designed for everyone who has supported our effort thus far:

1. Pack of 10 Silver Teflon PL259s for ONLY $8.00!
2. SMA Adaptors, mix and match, 3 for ONLY $10.00!
3. UHF SO239 3" Mag Mount, $2.00 off the regular price of $15.00 for ONLY $13.00!
4. Any order over $25.00 receives a special mystery gift FREE!

Order now at http://www.sauderelectronics.com

Thanks, and 73's

-Ben

316. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 07:56:48 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <r8nv3u0k6cfblf0qpiald81fp6jjeheehl@4ax.com>
Source record: 47308
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

On Sat, 12 Jan 2002 01:35:47 GMT, Gary Schafer <gschafer@mediaone.net> wrote:
>"William E. Sabin" wrote:
>> > The limitation for SSB on opposite sideband is set by the linearity of
>> > the power amplifiers. For a conventional amateur rig this limit is about
>> > 40 to 50 dB below PEP within the audio frequency range of the opposite
>> > sideband.
>> >
>> > Bill W0IYH
>>
>> The brief comments above need some clarification.
>> Consider USB. The opposite sideband (LSB)
>> contains the following:
>>
>> 1) LSB products that are due to the IF filter
>> response below the carrier frequency. That is, LSB
>> output from an USB xmtr. My spectrum measurements
>> show 40 to 60 dB reduction of these products using
>> a filter-type rig, depending on how far below the
>> carrier they are.
>
>It depends on how far out from the carrier you look. Usually the carrier is set
>at around 20 db down the filter slope. So at low frequencies, if the audio
>response is not limited, the opposite side band will be down only 20 db near the
>carrier. As you go out, higher audio frequency, the suppression gets better.

That's right for a *filter* rig. But a DSP phasing rig can offer the same good suppression at the lowest audio frequencies as it offers at higher audio frequencies. In other words, it isn't limited by the slope of a filter's response characteristic. The Hilbert transform used is frequency invariant. To compensate for the poor suppression at low audio frequencies, most filter type SSB rigs band limit the audio modulation, suppressing the lower frequency voice components before sending them to the modulator. It isn't necessary to do this with a DSP phasing modulator.

For *communications* quality speech, eliminating the lower frequency audio components isn't a detriment, but it can be for other purposes (for example SSB SW broadcasting, where best practical fidelity is desired, or for the current amateur rage for high fidelity audio). Other operating modes than voice can also benefit from the better fidelity (examples, PSK31, SSTV, etc).

>> 2) Distortion products generated directly by the
>> PA. These are not filtered by the SSB filter. The
>> typical adjacent channel "splatter" generated by a
>> speech signal is a gross example, but some of it
>> is present even in a fairly "clean" transmitter.

>> This is a pseudo-noise output.
>
>I assume that you are referring to 3rd order IM products here.

This is an argument for better PA linearity. The usual amateur practice
of trying to get the maximum output out of the smallest cheapest amplifier
tends to make this worse than it has to be. It is possible to do considerably
better than usual amateur practice, and do it with good efficiency too. As
example, our Harris Gold Line broadcast transmitters use very high efficiency
switch mode amplifiers which provide excellent fidelity at the cost of an
increase in amplifier complexity.

>> The receiver is *integrating* all of the stuff
>> that is in the LSB within a 2500 Hz bandwidth. The
>> total of all of that is typically in the range of
>> 40 to 50 dB below PEP for a medium performance SSB
>> xmtr, and 50 to 60 dB in commercial xmtrs.
>>
>> In view of all the sources of garbage in the LSB,
>> an infinite LSB rejection in the SSB generator is
>> not really justified, so far as SSB is concerned.

As you say, *all* of these spurious products are integrated by the receiver.
Reducing any one of them improves matters. In other words, you can't output
a cleaner signal than is input, so you want to start with the cleanest practical
input. Attacking every source of spurious after the modulator can improve
matters even more.

(It should be noted that *atmospheric* noise is typically the limiting factor
at HF. Reducing spurious below that noise floor is of little benefit except to
nearby stations, where the near-far relation makes even relatively low levels
of spurious of concern. The FCC permits a higher level of spurious output
for HF rigs than for VHF+ rigs, but in today's urban areas we need to be
concerned about the effects we may be having on our amateur neighbors.)

More to the point here, though, is that it has become cheaper to generate
high quality SSB using a DSP I/Q modulator than it is to do it with a
conventional filter type modulator. So, even if the improvement in spurious
were to be small in practice, it is now more cost effective to use the phasing
approach. Plus, use of a I/Q modulator offers other benefits to the operator
which are essentially "free" with this approach, ie an I/Q modulator can
do any arbitrary modulation form. This is of practical interest to amateurs
who wish to use any of the several newer communications modes. Instead
of trying to jury rig things at audio and push it through a conventional SSB
modulator, you can generate the signals directly in the modulation process,
with better fidelity and likely lower total system cost and complexity.

Gary

317. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 08:50:59 UTC
From: ritter@ciphersbyNOSPAMritter.com
Message-ID: <3c3ff8e2.29587215@netnews.att.net>
Source record: 47309

On Fri, 11 Jan 2002 15:12:09 GMT, in
<ivvt3u86muustl0cdpaj0u3rkp1a1lnj99@4ax.com>, in
rec.radio.amateur.homebrew Jack Smith <jsmith@mnsinc.com> wrote:

>[...]
>The question started out concerning the spurious mode in both the 2
>cyrstal filter and in the crystals themselves. It then drifted into
>"what is the series R of the crystal."
>
>the original question remains "is there a way to remove the spurious
>mode in the resulting filter?"
>
>Jack K8ZOA

Minimization of spurious responses was one of the early advantages of
ladder filters. From:

| Hardcastle, J. A. 1978. Some Experiments with High-Frequency
| Ladder Crystal Filters. QST. December. 22-41.

"Early attempts by the author to make high-frequency crystal filters
.. suffered from ... numerous spurious responses immediately adjacent
to the hf cut-off frequency.

"Ladder type filters are not so vulnerable to the effects of the
additional series resonances present in the crystals. This is so
because of the unlikelihood of these resonances occurring at identical
frequencies in all crystals."

Another important issue is the use of inductors across each crystal to
cancel crystal holder capacitance, as described in:

| Hayward, Wes. 1995. Refinements in Crystal Ladder Design.
| QEX. June. 16-21.

The resulting filter is *symmetrical*, and asymmetry of response has
been one of the classic problems. I have verified the improvement by
simulation. The author says:

"The scheme that is used to cancel Co, the parallel crystal C, is to
add inductance in parallel with the crystal, creating a parallel
resonance with Co. The inductance is made a bit smaller than needed
and a small trimmer capacitance is added, allowing for easy
adjustment.

"The added inductors are wound on ferrite toroids. This was required
for this low frequency filter [3.58 MHz]; the needed 150uH inductance

was not practical with iron-powder toroids.

"The only subtlety encountered was adjustment of the trimmer capacitors. I eventually shorted all four crystals with pieces of wire. Then the crystals were individually unshorted, the related capacitor was adjusted for a deep null about 20kHz away from the passband, and the crystal was again short circuited."

Yet another issue is that modern QRP designs (e.g. "Wilderness Radio Sierra" among others) use varicaps instead of fixed capacitors to ground. This is intended to provide a simple width control. My simulations show that this is remarkably effective, except that it changes the filter impedance, which has a major effect on passband ripple. If we could also vary the load and/or drive impedance to match the filter, or maybe just vary the innermost capacitances to minimize change in the externally-seen impedances, maybe this could be improved.

Terry KF5MH

318. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 12:10:06 UTC
From: "William E. Sabin" <sabinw@mwci.net>
Message-ID: <3C40279E.8090009@mwci.net>
Source record: 47310
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Gary Coffman wrote:

> As you say, *all* of these spurious products are integrated by the receiver.
> Reducing any one of them improves matters. In other words, you can't output
> a cleaner signal than is input, so you want to start with the cleanest practical
> input. Attacking every source of spurious after the modulator can improve
> matters even more.

This discussion, for me, pertains only to Amateur Radio. In this environment, economics and the cost-of-ownership (already quite high for many, which is probably why QRP and boatanchors are so popular) do not lead to extremely low levels of out-of-band emissions from the transmitter (due to all causes) or extremely low levels of susceptibility (due to all causes) in the receiver.

The receiver, tuned to the LSB, is an equal contributor to the LSB garbage because of its reciprocal mixing and its selectivity (which extends somewhat into the high-energy USB channel).

Despite the so-called Hi-Fi SSB clique who want to hear 15 Hz (all of which is nonsense, in my personal opinion), amateur SSB is a voice comm mode in which 300 to 3000 Hz is, and should be, the desired band. Frequencies outside that range can, and should be, attenuated very considerably.

The receiver cannot be ignored in the system analysis. It is just as important to the total "channel" as the transmitter.

Also, in transmitter or receiver, DSP is (and will be for a long time except for flea power systems) far removed from the antenna, and that provides a lot of opportunities for degradation of the signal, transmit or receive. I am familiar with the sales pitch for DSP, and that is OK, but like so many things it has been hyped beyond its *real* value.

As a practical matter, filter rigs that use high quality filters (xmit and rcv) provide out-of-band quality that is more than adequate, considering

the *entire* picture. It isn't true that there is only "one way to go" and all other ways are "just plain dumb".

No, I am not dwelling in the past, I am in the year 2002.

Bill W0IYH

319. Re: With just a DVM and Inductance meter...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 12:55:16 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <UmW%7.246822$WW.13334204@bgtnsc05-news.ops.worldnet.att.net>
Source record: 47311

An inductance meter would work ok; the main thing is removing the transformers from the radio. I have been ordering the ones that I need from places like Digi-Key. One transformer that works well is the Toko RMC502 182; the Digi-Key part number is TK1305-ND. This transformer works well as a coupling transformer with the MC1350 chips, and as an oscillator transformer with the NE602, when using this device as a product detector for SSB.

Pete KE9OA

Patrick <braincambre500@yahoo.com> wrote in message news:85a87c6c.0201112246.40014101@posting.google.com...
> Hello all,
>
> I would like to know this:
>
> If a person took out all of the IF transformers in a salvaged AM/FM
> radio, is is possible he could find out which can would be the 455 kHz
> IF transformer by just using a DVM and an inductance meter? Color slugs
> sometimes don't agree with said frequencies.
>
> a friend, Patrick

320. Re: 2.4ghz bi-directional pre-amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 14:07:38 UTC
From: "Carl R. Stevenson" <wa6vse-shack@fast.net>
Message-ID: <3c40459c_2@news7.fast.net>
Source record: 47312

Nope ... and modifying a Part 15 device would render
its approval by the FCC void.

Carl - wa6vse

"scooter" <scooter9@offworld1.net> wrote in message
news:8GL%7.194$w67.25351@cletus.bright.net...
> Does anyone know of a kit for this? This is for my wireless modem made by
> linksys.
>
> Thanks,
>
> Chris
> KB8ZHW
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.313 / Virus Database: 174 - Release Date: 1/2/02
>
>

321. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 14:12:19 UTC
From: "Carl R. Stevenson" <wa6vse-shack@fast.net>
Message-ID: <3c4046b9_1@news7.fast.net>
Source record: 47313
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

The entire issue of opposite sideband rejection can be rendered rather moot, if one uses the "Weaver" or "3rd method" of generating SSB, which is a variation on the phasing scheme.

In the Weaver method, you have the advantage that the desired and undesired sideband occupy THE SAME frequencies (they are overlaid on each other).

Thus, imperfect undesired sideband rejection doesn't fall on an adjacent channel, but instead appears as a slight increase in distortion in YOUR OWN channel. However, if that distortion is 40-50 (or more) dB down, which is pretty reasonable, it will be of little or no consequence.

Carl - wa6vse

"Gary Schafer" <gschafer@mediaone.net> wrote in message news:3C3F9252.A8B3F5B9@mediaone.net...
>
>
> "William E. Sabin" wrote:
>
> > >
> > >
> > > The limitation for SSB on opposite sideband is set by the linearity of
> > > the power amplifiers. For a conventional amateur rig this limit is
about
> > > 40 to 50 dB below PEP within the audio frequency range of the opposite
> > > sideband.
> > >
> > > Bill W0IYH
> >
> > The brief comments above need some clarification.
> > Consider USB. The opposite sideband (LSB)
> > contains the following:
> >
> > 1) LSB products that are due to the IF filter
> > response below the carrier frequency. That is, LSB
> > output from an USB xmtr. My spectrum measurements
> > show 40 to 60 dB reduction of these products using
> > a filter-type rig, depending on how far below the
> > carrier they are.

>
> It depends on how far out from the carrier you look. Usually the carrier
is set
> at around 20 db down the filter slope. So at low frequencies, if the audio
> response is not limited, the opposite side band will be down only 20 db
near the
> carrier. As you go out, higher audio frequency, the suppression gets
better.
>
>
> >
> >
> > 2) Distortion products generated directly by the
> > PA. These are not filtered by the SSB filter. The
> > typical adjacent channel "splatter" generated by a
> > speech signal is a gross example, but some of it
> > is present even in a fairly "clean" transmitter.
> > This is a pseudo-noise output.
>
> I assume that you are referring to 3rd order IM products here.
>
>
> >
> >
> > 3) Wideband white noise created by the amplifier
> > chain that comes after the SSB filter. Definitely
> > not negligible.
>
> This should be very low. In band noise, through the filter is much higher.
>
>
> >
> >
> > 4) L.O. phase noise with the usual "Xmas Tree"
> > spectrum shape.
>
> Should be in the area of 80 db down.
>
>
> >
> >
> > All of these are received within the passband of
> > an SSB receiver that is tuned to the lower
> > sideband. This receiver also has reciprocal
> > mixing due to its L.O. phase noise.
>
> This has nothing to do with the transmitter products.
>
>
> >

> >
> > The receiver is *integrating* all of the stuff
> > that is in the LSB within a 2500 Hz bandwidth. The
> > total of all of that is typically in the range of
> > 40 to 50 dB below PEP for a medium performance SSB
> > xmtr, and 50 to 60 dB in commercial xmtrs.
> >
> > In view of all the sources of garbage in the LSB,
> > an infinite LSB rejection in the SSB generator is
> > not really justified, so far as SSB is concerned.
> >
> > Chapter 17 of the ARRL Handbook, 1995 or later,
> > also has a discussion of this topic.
> >
> > Bill W0IYH
> >
>
> As a side note, a phasing type generator will have products show up on the
> opposite side band from 2nd order distortion products in the audio. 3rd
order
> products do not show up on the opposite side band but do on the wanted
side
> band. I think I have that right.
>
> 73
> Gary K4FMX
>
>
> >
> >
>

322. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 14:59:40 UTC
From: "William E. Sabin" <sabinw@mwci.net>
Message-ID: <3C404F5C.6040901@mwci.net>
Source record: 47314
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Carl R. Stevenson wrote:

> The entire issue of opposite sideband rejection can be
> rendered rather moot, if one uses the "Weaver" or "3rd
> method" of generating SSB, which is a variation on the
> phasing scheme.

This is true only if the two required lowpass filters are ideal boxcar FIR filters, which is the same as the requirement for conventional SSB using the phasing method. The Weaver method is no panacea either.

Bill W0IYH

323. ft 2600 modification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 15:13:01 UTC
From: gervais <gfillio1@globetrotter.net>
Message-ID: <1oY%7.55775$qF2.5583655@carnaval.risq.qc.ca>
Source record: 47315

hi,i am looking for a web page where i can find information about the modifictaion that i could perform on my ft2600

any help will appreciated

ve2ckn,gervais

324. Re: ft 2600 modification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 16:30:48 UTC
From: Larry Gagnon <lagagnonfake@sprint.ca>
Message-ID: <slrna40p5g.3vvrg4n.lagagnonfake@lagagnon.sprint.ca>
Source record: 47316

In article <1oY%7.55775$qF2.5583655@carnaval.risq.qc.ca>, gervais wrote:
> hi,i am looking for a web page where i can find information about the
> modifictaion that i could perform on my ft2600
>
> any help will appreciated
>
> ve2ckn,gervais

Gervais...http://www.kb2ljj.com/yaesu.html is a wonderful database
of modifications to most amateur radio equipment. Good luck e adieu..

Larry VE6MK

325. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 17:02:09 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C406C11.2020F6D1@ieee.org>
Source record: 47317

I agree that power in the measurement is important. In some work I did a number of years ago on a modem product I was in contact with an industry expert and his claim was that I should specify a maximum power as low as possible, maybe 20 microwatts (I forget the value) and not 2 milliwatts. His assertion was the good crystal manufacturers will have no trouble manufacturing such a device and I will get a better crystal. The not so good manufacturers would complain. He advised that I should operate the crystal at the lowest power that will allow it to oscillate.

Could the original poster be clobbering the filter with so much power that undesirable resonsonce is seen, and that in actual operation it will not?

Can anyone here describe the method Wes Hayward used to measure the crystal parameters?

On this page is the method I have used... comments?

http://www.electronics-tutorials.com/filters/filter-software.htm

Clyde
KA1CRV

Wes Stewart wrote:

> On Thu, 10 Jan 2002 22:21:05 GMT, Jack Smith <jsmith@mnsinc.com> wrote:
>
> |This rambles a bit, but there's a question or two that require some
> |setup.
>
> I will ramble a bit too and interject random thoughts
> |
> |A few weeks ago, I bought 300 crystals (13.500 MHz) for a few cents
> |each, with the thought that I would try my hand at a few crystal
> |filters.
>
> These are probably not high quality rocks
> |
> |I measured the average crystal parameters (using the technique
> |suggested by Wes Hayward) as:
>
> Is this method the one described in "Introduction to Radio Frequency Design"?
> |
> |Rs = 1.92 ohms
> |Lm = 4.3048 mH
> |Cm = 32.321 fF
> |Ch = 6.2 pF
>

> As others have stated, Rs looks low.
> |
> |Using these parameters, I designed a 2 crystal and a 4 crystal filter
> |1 Khz bandwidth, Butterworth, and breadboarded them today. (For easy
> |measurement, I also built an L matching network at each end to match
> |to 50 ohm test equipment.) Also ran some SPICE simulations on the
> |designs and all seemed OK.
>
> Are these lattice or ladder filters?
> |
> |First, the 2 crystal filter. I measured the 1 KHz response, and it
> |looked almost like the SPICE simulation, 3 dB BW 910 Hz, a little
> |tight, but not so bad. Passband looked just like it should, nice top.
> |Ultimate rejection > 80 dB even with breadboard layout. Center
> |frequency (minimum VSWR and also minimum loss) 13500.520 KHz, loss 2.2
> |dB, return loss 23 dB when filter output terminated with a good 50 ohm
> |load.
> |
> |I then put the filter on my network analyzer (an old HP8754A) and
> |swept it out, using an outboard FM signal generator for better
> |performance in narrow sweeps. Sure surprised me when I found a second
> |passband, with a 3 dB bandwidth of about 200 Hz width (3 dB points),
> |at 13578.880 KHz. The second passband was only 30 dB down.
> |
> |I then swept a crystal by itself, and in addition to the normal series
> |and parallel resonance points around 13500 KHz, I found two more
> |series/parallel resonance points, up around the area where I found the
> |second passband, between 75 and 100 KHz above 13500 KHz.
>
> Yep.
> |
> |I concluded that the spurious passband is the passband caused by these
> |secondary series/parallel resonance points coinciding.
>
> Probably. Strictly speaking, "spurious" response is incorrect, these are real
> responses. In crystal spec terminology, these are called "unwanted" modes
> (although some manufactures do call them spurious). They result from (among
> other things) problems in processing the quartz blanks.
>
> In the old MIL specs, (MIL-C-3098, later MIL-PRF-3098) states, "all unwanted
> modes shall have a resistance that exceeds two times the main mode resistance."
>
> So, the presence of these modes is anticipated.
>
> Unfortunately, they are most troublesome in filter applications. In
> oscillators, the limiting action tends to suppress them, if you can get the
> damned thing running on the correct resonance in the first place :)
>
> |
> |Question: Anyway to kill this spurious? I have an application that I

> |would like to use a 2 crystal filter in.
>
> I would think this would be difficult, if not impossible.
>
> |
> |I then built the 4 crystal version, and no trace of a spurious
> |response. All performs pretty much in accordance with the theory and
> |SPICE simulations. I'm guessing that the spurious frequencies show
> |greater deviation than the fundamental resonance points and that my
> |first two crystal filter just had an unfortunate alignment of spurs.
> |I'll run some more detailed individual crystal measurements tomorrow
> |and try a different set of crystals in the two crystal filter, but I
> |wanted to see if anyone had some experience in this area and could
> |point me in the right direction.
>
> Another thing that can bite you is the fact that crystal parameters are drive
> level sensitive. You need to make some measurements with different drive powers
> and see whether your answers are consistant.
>
> When I was still employed, I developed a measurement technique using an H-P 3577
> VANA and homegrown software (HP Basic on a 9836). The '3577 could sweep not
> only frequency but output power. One test I implemented would start measuring at
> very low drive (-40 dBm as I recall). The Fs, ESR, and unwanted modes would be
> measured and then the drive increased by a desired increment and the parameters
> would be remeasured. This process would be repeated until the max permited
> crystal dissipation was reached and then *the process would be reversed*, i.e.,
> the power would be stepped down in the same increments.
>
> If the data were plotted; ESR, Fs, etc. v. drive level, often times a hystersis
> would be noted. Starting at low drive, the ESR would start off high and
> decrease to a minimum (sometimes again increasing at higher drive) and then when
> the power sweep was reversed, the ESR would stay at a low value all the way back
> down the power sweep. These are known as "lazy" crystals.
>
> One believed cause of this is that impurities that have settled on the crystal
> blank during non-operation are driven off once the crystal starts vibrating.
> The ESR is primarily due to the mechanical friction so the additional "loading"
> of the impurities causes it to be greater.
>
> The kicker in this is that the unwanted modes don't necessary behave the same as
> the primary modes (particularly over temperature). Fun huh?
>
> Another problem with extracting the motional parameters is that the shunt
> capacitance distorts the series resonance curve. The true series resonant
> frequency (defined as zero phase shift) is not the same as the minimum impedance
> frequency.
>
> Using software and the built-in trace math capability of the '3577 I would
> measure the shunt C at a frequency far removed from resonance and then "tune it
> out" with a mathematical "shunt" inductor. Over a narrow frequency range near

> resonance the slope of reactance v. frequency was now linear and can be
> determined by taking a few samples. The motional parameters could then be
> calculated.
>
> This work was done back when the only PC's in the facility were on the managers'
> desks. Therefore most of the data processing was done in the instrument. Today,
> I'd probably do it in Mathcad or Excel (although the latter is a mess with
> complex numbers)
>
> I found it easier to measure the crystals as a one-port, rather than two-port
> device. I could then do a full open-short-load calibration with the fixture in
> place. Most of the crystals I tested were either TO-5 or surface mount and I
> used empty packages to build cal standards.
>
> Some good references are:
>
> MIL-PRF-3098 is at:
>
> http://www.dscc.dla.mil/Programs/MilSpec/listdocs.asp?BasicDoc=MIL-PRF-3098
>
> EIA-512 "Standard Methods for Measurement of the Equivalent Elecrical Parameters
> of Quartz Crystal Units, 1 KHZ to 1 GHz.", published by the Electronic
> Industries Association. (www.eia.org) This standard is incorporated by
> reference into the MIL standard.
>
> A wealth of info at:
>
> http://www.corningfrequency.com/features.htm
>
> "Good EMI/RFI Performance Begins with Crystal Test", Electronics Test Magazine,
> April 1988 pp 64-69.
>
> "An Advanced 5-Hz-to-200-MHz Network Analyzer", Hewlett-Packard Journal November
> 1984.
>
> End of ramble.
>
> Wes N7WS

326. Re: With just a DVM and Inductance meter...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 17:26:57 UTC
From: Michael Black <blackm00@cam.org>
Message-ID: <Pine.LNX.4.20.0201121217010.23287-100000@darkstar.example.net>
Source record: 47318

On 11 Jan 2002, Patrick wrote:

> Hello all,
>
> I would like to know this:
>
> If a person took out all of the IF transformers in a salvaged AM/FM
> radio, is is possible he could find out which can would be the 455 kHz
> IF transformer by just using a DVM and an inductance meter? Color slugs
> sometimes don't agree with said frequencies.
>
> a friend, Patrick
>

I can't point you to a schematic, but you used to see articles about
oscillators that would help you sort out IF transformers and coils.
The oscillators would be of such design that they would operate over
a wide range of frequencies, with the frequency based on an external
LC circuit. So you'd connect the unknown IF transformer to the terminals,
and listen in your general coverage receiver for the signal. You might
have to do some sorting to make sure you had a fundamental frequency
and not a harmonic, and you'd most likely just get a frequency in
the general range, but it sure would separate 455KHz transformers
from 10.7Mhz transformers, and also those oscillator coils that reside
in the same sort of case.

If you don't have a general coverage receiver, you could make a couple
of oscillators, one at 455KHz and one at 10.7MHz. Crystal controlled
would be handiest, but such frequencies are relatively difficult to come
by. Then you feed the output of one oscillator through your IF
transformers, one at a time, with a diode detector on the output winding,
feeding your DVM (or just some 200uA or so meter out of a junk piece
of equipment). The transformers that are at that frequency will should
give a higher reading on the meter than the other transformers. (If you
had a wide-range signal generator, you wouldn't have to build the
oscillators, but you wanted a minimal equipment solution.)

Another scheme is to trace out the wiring of the radio before you
take the transformers off the board. This may not be feasible some
or a lot of the time, because it depends on the circuit of the radio.
But if you can find the IC in the ECG replacement guide, there might
be enough information to help you sort out the transformers, or
at least reinforce the validity of the transformer color code.

Michael VE2BVW

327. Re: Swapping eCAD files : Wanting to make MW rx .

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 18:26:59 UTC
From: Richard Daventry <newsgps_email@ntlworld.com>
Message-ID: <Fc%%7.3374$Hg7.393495@news11-gui.server.ntli.net>
Source record: 47319

"Richard Daventry" <newsgps_email@ntlworld.com> wrote in message
news:y2C%7.14081$Hx3.1663750@news11-gui.server.ntli.net...
> Some homebrewers must use eCAD and produce schematic and netlist files etc
> to produce PCB layouts.
>
> It's not so simple to do, because eCAD makers tend to arrange file formats
> specific to their eCAD programs, but do folks ever swap their files, so
> others can benefit?

I think the answer is no.

328. Re: 3 piece mast/guy wire clamps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 18:29:41 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <Od008.4956$_x4.732960@news2-win.server.ntlworld.com>
Source record: 47323

> Need some guy wire clamps typically used with TV antenna installations.
They
> are the three piece style that attach around the mast. Seems they are out
of
> production and aren't sold at Radio Shack, Lowe's, Home Depot, Wal-Mart,
> K-Mart, etc. Any leads would be appreciated.
========
If you can't get these clamps try 4 stainless steel 'jubilee' hose clamps
,with one around the mast and the other 3 as lugs tied (under 120 degrees
each) by the first one . Perhaps not a very elegant solution but probably
effective.
Instead of the 3 clamps used as lugs you might find 3 metal rings ,clamped
to the mast by 1 hose clamp.

Frank gm0csz.kn6wh@ntlworld.com

329. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 19:00:10 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <24014uc9c018ldedhkfunk5h5ft8g79dgd@4ax.com>
Source record: 47320
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

On Sat, 12 Jan 2002 06:10:06 -0600, "William E. Sabin" <sabinw@mwci.net> wrote:
>Gary Coffman wrote:
>> As you say, *all* of these spurious products are integrated by the receiver.
>> Reducing any one of them improves matters. In other words, you can't output
>> a cleaner signal than is input, so you want to start with the cleanest practical
>> input. Attacking every source of spurious after the modulator can improve
>> matters even more.
>
>
>This discussion, for me, pertains only to Amateur
>Radio. In this environment, economics and the
>cost-of-ownership (already quite high for many,
>which is probably why QRP and boatanchors are so
>popular) do not lead to extremely low levels of
>out-of-band emissions from the transmitter (due to
>all causes) or extremely low levels of
>susceptibility (due to all causes) in the receiver.

I don't think economics plays much of a role for most people
in the decision to operate boatanchors or to homebrew. I think
that cost sensitivity is more of an issue for manufacturers of
mass produced new equipment. In any event, the DSP I/Q
modulator approach has become the cheaper alternative to
a good quality filter type modulator.

The use of higher linearity PAs remains something of a daunting
problem for the users of *any* type of SSB modulator. A high linearity
PA remains either complex or inefficient compared to the methods
ordinarily used by amateurs. But it is something that amateurs should
be considering in today's crowded conditions. It can be achieved.

>Despite the so-called Hi-Fi SSB clique who want to
>hear 15 Hz (all of which is nonsense, in my
>personal opinion), amateur SSB is a voice comm
>mode in which 300 to 3000 Hz is, and should be,
>the desired band. Frequencies outside that range
>can, and should be, attenuated very considerably.

I don't disagree, but people use SSB type transmitters
for other things than voice communications. So the
advantage of better sideband suppresssion at the
lower modulating frequencies is a nice benefit, as is
the ability to directly generate other modulation forms.
And there's no cost penalty to be paid for those features.

>As a practical matter, filter rigs that use high
>quality filters (xmit and rcv) provide out-of-band
>quality that is more than adequate, considering
>the *entire* picture. It isn't true that there is
>only "one way to go" and all other ways are "just
>plain dumb".

I agree with you there too. I was just pointing out
that the DSP phasing approach can match or better
the performance of a good filter modulator, and can
cost less too. Better *and* cheaper is a hard
combination to beat.

Also, the DSP approach eliminates the concerns
about temperature sensitivity and component
variations that plague the analog phasing approach.
It can't get "out of adjustment". The phasing approach
almost dropped out of sight for years because of those
problems, but a DSP I/Q modulator solves them. This
has little application for the boatanchor operator, but
it should be of interest to the homebrewer.

Gary

330. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 19:17:43 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <jn214ush0ttfcuu9bno8502iddrnivj7b1@4ax.com>
Source record: 47321
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

On Sat, 12 Jan 2002 08:59:40 -0600, "William E. Sabin" <sabinw@mwci.net> wrote:
>Carl R. Stevenson wrote:
>
>> The entire issue of opposite sideband rejection can be
>> rendered rather moot, if one uses the "Weaver" or "3rd
>> method" of generating SSB, which is a variation on the
>> phasing scheme.
>
>
>This is true only if the two required lowpass
>filters are ideal boxcar FIR filters, which is the
>same as the requirement for conventional SSB using
>the phasing method. The Weaver method is no
>panacea either.

No, it isn't the same. The Weaver method requires
more computational complexity than simply generating
a Hilbert transform.

Gary

331. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 19:39:59 UTC
From: "William E. Sabin" <sabinw@mwci.net>
Message-ID: <3C40910F.1060007@mwci.net>
Source record: 47322
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Gary Coffman wrote:

> On Sat, 12 Jan 2002 06:10:06 -0600, "William E. Sabin" <sabinw@mwci.net> wrote:
>
>>Gary Coffman wrote:
>>
>>>As you say, *all* of these spurious products are integrated by the receiver.
>>>Reducing any one of them improves matters. In other words, you can't output
>>>a cleaner signal than is input, so you want to start with the cleanest practical
>>>input. Attacking every source of spurious after the modulator can improve
>>>matters even more.
>>>
>>
>>This discussion, for me, pertains only to Amateur
>>Radio. In this environment, economics and the
>>cost-of-ownership (already quite high for many,
>>which is probably why QRP and boatanchors are so
>>popular) do not lead to extremely low levels of
>>out-of-band emissions from the transmitter (due to
>>all causes) or extremely low levels of
>>susceptibility (due to all causes) in the receiver.
>>
>
> I don't think economics plays much of a role for most people
> in the decision to operate boatanchors or to homebrew. I think
> that cost sensitivity is more of an issue for manufacturers of
> mass produced new equipment. In any event, the DSP I/Q
> modulator approach has become the cheaper alternative to
> a good quality filter type modulator.
>
> The use of higher linearity PAs remains something of a daunting
> problem for the users of *any* type of SSB modulator. A high linearity
> PA remains either complex or inefficient compared to the methods
> ordinarily used by amateurs. But it is something that amateurs should
> be considering in today's crowded conditions. It can be achieved.
>
>
>>Despite the so-called Hi-Fi SSB clique who want to
>>hear 15 Hz (all of which is nonsense, in my
>>personal opinion), amateur SSB is a voice comm
>>mode in which 300 to 3000 Hz is, and should be,
>>the desired band. Frequencies outside that range
>>can, and should be, attenuated very considerably.

>>
>
> I don't disagree, but people use SSB type transmitters
> for other things than voice communications. So the
> advantage of better sideband suppresssion at the
> lower modulating frequencies is a nice benefit, as is
> the ability to directly generate other modulation forms.
> And there's no cost penalty to be paid for those features.
>
>
>>As a practical matter, filter rigs that use high
>>quality filters (xmit and rcv) provide out-of-band
>>quality that is more than adequate, considering
>>the *entire* picture. It isn't true that there is
>>only "one way to go" and all other ways are "just
>>plain dumb".
>>
>
> I agree with you there too. I was just pointing out
> that the DSP phasing approach can match or better
> the performance of a good filter modulator, and can
> cost less too. Better *and* cheaper is a hard
> combination to beat.
>
> Also, the DSP approach eliminates the concerns
> about temperature sensitivity and component
> variations that plague the analog phasing approach.
> It can't get "out of adjustment". The phasing approach
> almost dropped out of sight for years because of those
> problems, but a DSP I/Q modulator solves them. This
> has little application for the boatanchor operator, but
> it should be of interest to the homebrewer.
>
> Gary
>
>

OK.

Bill W0IYH

332. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 22:03:07 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <n6b14uo514u9f4ciik3tuq64mlkob8a6oq@4ax.com>
Source record: 47324

Wes:

Very interesting and thanks for the detailed reply.

On Fri, 11 Jan 2002 18:48:16 GMT, n7ws@yahoo.com (Wes Stewart) wrote:

>
>Is this method the one described in "Introduction to Radio Frequency Design"?

My original measurements were based on feeding the crystal with a 50 ohm source and load and measuring the 3 dB point. This is described by N2DCH in "Ladder Crystal Filters" as being from your 1982 QST article.

Today, I built the osc/emitter follower test circuit described in your 1995 QEX article and remeasured my 5 test crystals. I found Cm values about 50% below those I calculated from the 3 dB data, and Lm about 50% above the 3 db calculated values.

I haven't determined why such a great discrepancy exists, between the two methods, but I'll work on that tomorrow.

>
>Are these lattice or ladder filters?

Ladder.

>|I concluded that the spurious passband is the passband caused by these
>|secondary series/parallel resonance points coinciding.
>
>Probably. Strictly speaking, "spurious" response is incorrect, these are real
>responses. In crystal spec terminology, these are called "unwanted" modes
>(although some manufactures do call them spurious). They result from (among
>other things) problems in processing the quartz blanks.
>

I did a bit of library research and found an interesting comment in "Hy-Q Handbook of Quartz Crystal Devices," David Salt (Van Nostrand Reinhold (UK), 1987.) The responses just above the series resonance point are due to "inharmonic modes." Zverev's Handbook of Filter Synthesis says that the solution to these undesired resonances is to use more crystals in the filter and that since the undesired resonances seldom coincide in frequency, the result is satisfactory. So, I seem to have rediscovered the fact that crystals are the nice linear things I thought they were a week ago.

>If the data were plotted; ESR, Fs, etc. v. drive level, often times a hystersis
>would be noted. Starting at low drive, the ESR would start off high and
>decrease to a minimum (sometimes again increasing at higher drive) and then when

>the power sweep was reversed, the ESR would stay at a low value all the way back
>down the power sweep. These are known as "lazy" crystals.
>
I ran a series of Rs measurements at different drive levels, using the
trimpot substitution method that I believe you described in one of
your articles.

I found quite a change with Rs versus drive. (I used a 6 dB pad on the
crystal input, so the actual crystal drive level is 6 dB below the
signal generator output.)

Sig Gen Out (dBm) Rs (ohms)
-50 48.22
-45 18.55
-40 8.862
-35 5.926
-30 4.851
-20 4.236
-10 4.176
0 3.860
+10 3.914
+15 4.200
+18 6.370

(The three decimal places are from the ohmmeter, but the basic
substitution method is probably +/- 5 percent, considering all the
variables.)

As far as whether the spurious in the 2 crystal filter are a product
of drive level issues, as KA1CRV suggested, I don't think so, I
watched it on a spectrum analyzer as I swept a signal generator over
it at -30 dBm or thereabouts. It looked the same on the network
analyzer at 0 dBm.

Jack K8ZOA

333. Re: With just a DVM and Inductance meter...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-12 22:37:40 UTC
From: John O'Flaherty <wewelcomespam@blackhole.net>
Message-ID: <3C40BAB4.63E899A7@blackhole.net>
Source record: 47325

Patrick wrote:
>
> Hello all,
>
> I would like to know this:
>
> If a person took out all of the IF transformers in a salvaged AM/FM
> radio, is is possible he could find out which can would be the 455 kHz
> IF transformer by just using a DVM and an inductance meter? Color slugs
> sometimes don't agree with said frequencies.

If you pry back the little metal tabs that hold the shielding can on,
the difference between the 10.7 MHz and the 455 KHz should be obvious-
there'll be less wire on the higher frequency ones.

--
john

334. Re: With just a DVM and Inductance meter...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 00:34:02 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C40D5FA.5C7ECC90@ieee.org>
Source record: 47326

Ah..... The old "Blue Eye Theorem" one of my favourite college professor's spoke about...

Sometimes you just have to open the baby blues and look at the problem! This was usually his answer when someone asked about a circuit on the blackboard, "What's the value of R1?" and it was on the board already....

Clyde

John O'Flaherty wrote:

> Patrick wrote:
> >
> > Hello all,
> >
> > I would like to know this:
> >
> > If a person took out all of the IF transformers in a salvaged AM/FM
> > radio, is is possible he could find out which can would be the 455 kHz
> > IF transformer by just using a DVM and an inductance meter? Color slugs
> > sometimes don't agree with said frequencies.
>
> If you pry back the little metal tabs that hold the shielding can on,
> the difference between the 10.7 MHz and the 455 KHz should be obvious-
> there'll be less wire on the higher frequency ones.
>
> --
> john

335. Re: Front Panel Layout software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 00:44:55 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C40D887.B980AEE4@ieee.org>
Source record: 47327

That looks pretty sharp...

I had not thought of this before, but silk screening is pretty easy, and the hard part is getting a stencil. Using this software and printing on overheads as you suggest, makes an easy way to get a stencil.. I will have to try this myself.

Clyde
KA1CRV

"Sverre Holm (LA3ZA)" wrote:

> I have used WB8CR's program and I can recommend it. It is very simple to use
> and gives excellent results. I have some examples on my homepage:
> www.qsl.net/la3za. Look under Homebrew and K2.
> Sverre Holm, LA3ZA
> Asker, Norway (59.8N, 10.4E)
>
> xpyttl" <xpyttl_nospam@earthling.net> wrote in message
> news:u3pntfgsfj5a24@corp.supernews.com...
>
> > Phil
> >
> > I have a freeware program at http://hfradio.org/wb8rcr
> >
> > It is available for Linux or Windows command line. Source is available if
> > you want to compile it for another operating system.
> >
> > As a command line utility, it's a little clunky, nothing at all fancy, but
> > you can lay out a decent panel pretty quickly, which is the objective
> after
> > all.
> >
> > ..
> >
> > "Philip de Cadanet" <phil@invest.fsbusiness.co.uk> wrote in message
> > news:Q69MOEAihCP8Ewww@invest.fsbusiness.co.uk...
> > > Can anyone recommend any of the above and a possible source?
> > >
> > > Win based please.
> > >
> > > Tnx
> > >
> > > Phil G4ZOW
> > >

> >
> >

336. Product detector for communications receiver ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 01:08:09 UTC
From: la8ak.xnd@online.no
Message-ID: <3c40db44.199925342@news.online.no>
Source record: 47328

Collecting information about receiver technique to use on my web site,
but I haven't found any proof when product detectors were used for the
first time.
A note in QST 1950 mentions the application of 6BE6, but it should
indicate that older types like 6K8 or 6SA7 has already been used.
Some early German application uses ACH1 (triode hexode)

Have QST on CD, but only the period 1950-1959 and few loose magazines
for the period 1947-1952, so I would be grateful if somebody could
send me a circuit diagram or article from before 1950 as gif file to
be used on my planned website on www.noding.com

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

337. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 01:33:32 UTC
From: n7ws@yahoo.com
Message-ID: <3c40bac1.26562644@news.triconet.org>
Source record: 47329

On Sat, 12 Jan 2002 22:03:07 GMT, Jack Smith <jsmith@mnsinc.com> wrote:

|Wes:
|
|Very interesting and thanks for the detailed reply.
|
|On Fri, 11 Jan 2002 18:48:16 GMT, n7ws@yahoo.com (Wes Stewart) wrote:
|
|
|>
|>Is this method the one described in "Introduction to Radio Frequency Design"?
|
|My original measurements were based on feeding the crystal with a 50
|ohm source and load and measuring the 3 dB point. This is described by
|N2DCH in "Ladder Crystal Filters" as being from your 1982 QST article.
|
|Today, I built the osc/emitter follower test circuit described in your
|1995 QEX article and remeasured my 5 test crystals. I found Cm values
|about 50% below those I calculated from the 3 dB data, and Lm about
|50% above the 3 db calculated values.

Ah, but it's not my article, you must have me confused with Wes Hayward.
|
|I haven't determined why such a great discrepancy exists, between the
|two methods, but I'll work on that tomorrow.
|
|
|>
|>Are these lattice or ladder filters?
|
|Ladder.
|
|
|>|I concluded that the spurious passband is the passband caused by these
|>|secondary series/parallel resonance points coinciding.
|>
|>Probably. Strictly speaking, "spurious" response is incorrect, these are real
|>responses. In crystal spec terminology, these are called "unwanted" modes
|>(although some manufactures do call them spurious). They result from (among
|>other things) problems in processing the quartz blanks.
|>
|
|I did a bit of library research and found an interesting comment in
|"Hy-Q Handbook of Quartz Crystal Devices," David Salt (Van Nostrand
|Reinhold (UK), 1987.) The responses just above the series resonance

|point are due to "inharmonic modes." Zverev's Handbook of Filter
|Synthesis says that the solution to these undesired resonances is to
|use more crystals in the filter and that since the undesired
|resonances seldom coincide in frequency, the result is satisfactory.
|So, I seem to have rediscovered the fact that crystals are the nice
|linear things I thought they were a week ago.
|
|>If the data were plotted; ESR, Fs, etc. v. drive level, often times a hystersis
|>would be noted. Starting at low drive, the ESR would start off high and
|>decrease to a minimum (sometimes again increasing at higher drive) and then when
|>the power sweep was reversed, the ESR would stay at a low value all the way back
|>down the power sweep. These are known as "lazy" crystals.
|>
|I ran a series of Rs measurements at different drive levels, using the
|trimpot substitution method that I believe you described in one of
|your articles.

Not me again :)
|
|I found quite a change with Rs versus drive. (I used a 6 dB pad on the
|crystal input, so the actual crystal drive level is 6 dB below the
|signal generator output.)
|
|Sig Gen Out (dBm) Rs (ohms)
|-50 48.22
|-45 18.55
|-40 8.862
|-35 5.926
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|-20 4.236
|-10 4.176
|0 3.860
|+10 3.914
|+15 4.200
|+18 6.370
|
|(The three decimal places are from the ohmmeter, but the basic
|substitution method is probably +/- 5 percent, considering all the
|variables.)
|
|As far as whether the spurious in the 2 crystal filter are a product
|of drive level issues, as KA1CRV suggested, I don't think so, I
|watched it on a spectrum analyzer as I swept a signal generator over
|it at -30 dBm or thereabouts. It looked the same on the network
|analyzer at 0 dBm.

As you have already discovered, with only two crystals the unwanted responses
can be problematic; with four you didn't see the problem.

More later,

Wes N7WS

338. Re: Product detector for communications receiver ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 02:18:33 UTC
From: motsteve@mediaone.net
Message-ID: <motsteve-1201022120400001@dplane-176-88-250.pompano.net>
Source record: 47330

In article <3c40db44.199925342@news.online.no>, LA8AK,xnd@Online.NO wrote:

> Collecting information about receiver technique to use on my web site,
> but I haven't found any proof when product detectors were used for the
> first time.
> A note in QST 1950 mentions the application of 6BE6, but it should
> indicate that older types like 6K8 or 6SA7 has already been used.
> Some early German application uses ACH1 (triode hexode)
>
> Have QST on CD, but only the period 1950-1959 and few loose magazines
> for the period 1947-1952, so I would be grateful if somebody could
> send me a circuit diagram or article from before 1950 as gif file to
> be used on my planned website on www.noding.com
>
> 73
> Jan-Martin
> LA8AK
> --
> remove ,xnd to reply

Hi Again J-N,

I would guess that the place to go would be to an archive of Western Electric as they are the ones that came up with sideband in the 1920's. Have you tried a web search on this?

Steve
WB4CZR

Plantation, FL

RF is a royal pain.

339. Re: Product detector for communications receiver ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 04:13:52 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <a1r1hf$ue2$1@nntp9.atl.mindspring.net>
Source record: 47331

Jan:

It all depends upon your definition of "product detector".

My definition is that a product detector is a device whose output contains at least one componen that represents the "product" (i.e. the multiplication) of the incoming signal and a locally generated carrier. This is a functional definition, of what a product detector does, not how it does it.

If you use the above definition, product detectors are probably very very very old... i.e. even a diode pumped with a local BFO fills the bill.

--Peter K1PO

"J M Noeding" <la8ak.xnd@online.no> wrote in message news:3c40db44.199925342@news.online.no...
> Collecting information about receiver technique to use on my web site,
> but I haven't found any proof when product detectors were used for the
> first time.
> A note in QST 1950 mentions the application of 6BE6, but it should
> indicate that older types like 6K8 or 6SA7 has already been used.
> Some early German application uses ACH1 (triode hexode)
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> send me a circuit diagram or article from before 1950 as gif file to
> be used on my planned website on www.noding.com
>
> 73
> Jan-Martin
> LA8AK
> --
> remove ,xnd to reply

340. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 07:42:59 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <a1rduk$8ga$1@slb5.atl.mindspring.net>
Source record: 47332
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Gary Coffman wrote:

>> SNIP <<

>
> I don't think economics plays much of a role for most people
> in the decision to operate boatanchors or to homebrew. I think
> that cost sensitivity is more of an issue for manufacturers of
> mass produced new equipment. In any event, the DSP I/Q
> modulator approach has become the cheaper alternative to
> a good quality filter type modulator.
>
> I don't disagree, but people use SSB type transmitters
> for other things than voice communications. So the
> advantage of better sideband suppresssion at the
> lower modulating frequencies is a nice benefit, as is
> the ability to directly generate other modulation forms.
> And there's no cost penalty to be paid for those features.
>
>>As a practical matter, filter rigs that use high
>>quality filters (xmit and rcv) provide out-of-band
>>quality that is more than adequate, considering
>>the *entire* picture. It isn't true that there is
>>only "one way to go" and all other ways are "just
>>plain dumb".
>>
>
> I agree with you there too. I was just pointing out
> that the DSP phasing approach can match or better
> the performance of a good filter modulator, and can
> cost less too. Better *and* cheaper is a hard
> combination to beat.
>
> Also, the DSP approach eliminates the concerns
> about temperature sensitivity and component
> variations that plague the analog phasing approach.
> It can't get "out of adjustment". The phasing approach
> almost dropped out of sight for years because of those
> problems, but a DSP I/Q modulator solves them. This
> has little application for the boatanchor operator, but
> it should be of interest to the homebrewer.
>
> Gary
>

I think there are a few other ideas to be thought about in this discussion..

One thing is, the question of how high in frequency the phasing Tx IQ modulator would be working at. If it will be used on the desired Tx frequency directly, then the RF phasing network becomes a concern, particularly if one is trying for more than one ham band.

Another one is, will the same piece of equipment be used as a basis for a transciever.

A DSP I/Q phasing type system introduces a few twists on the reasonable dynamic range, and if one converts down to a low enough IF for a DSP system, then mixer spurs and intermods become a larger issue than a single conversion to a high IF crystal filter.

Those same mixer spurs haunt transmitters too, particularly if starting from a low enough frequency for DSP chips to easily run at.

==========

With surplus timebase crystals, I was able to construct three multipole crystal filters and when I cascaded them in an IF strip, I got STEEP filter skirts. The total cost of all three of the filters together was about $15...

And I know darn well that by the time I got done with a good DSP chip, CPU to run it, and for the Rx something like a pair of 16 bit or better A/D chips for dynamic range, I'd be WAY higher in price.

==========

It seems to me that a homebrewer is more likely to be interested in making a transciever, and may perhaps not be easily able to deal with DSP code and so on.

A DSP and an IQ modulator do have a place in the thinking. But as with most engineering, there are good and not so good parts to any approach.

And, I will admit, I come from an analog background. I'm inclined to use easy to understand and proven to work well types of designs.

Well, OK, so I am planning on a DDS based LO chain. Gotta clean up the digital spurs they generate, but I do like the stability.

Jim Pennell
N6BIU

341. Re: Product detector for communications receiver ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 10:58:39 UTC
From: motsteve@mediaone.net
Message-ID: <motsteve-1301020600470001@dplane-176-88-250.pompano.net>
Source record: 47333

In article <a1r1hf$ue2$1@nntp9.atl.mindspring.net>, "Peter O. Brackett"
<ab4bc@ix.netcom.com> wrote:

> Jan:
>
> It all depends upon your definition of "product detector".
>
> My definition is that a product detector is a device whose output contains
> at least one componen that represents the "product" (i.e. the
> multiplication) of the incoming signal and a locally generated carrier.
> This is a functional definition, of what a product detector does, not how it
> does it.
>
> If you use the above definition, product detectors are probably very very
> very old... i.e. even a diode pumped with a local BFO fills the bill.
>
> --Peter K1PO

Peter,

I also thought that maybe Jan-Martin was looking for any "mixer" type of
detector, but then I thought that maybe he wanted the other types of detectors
which are more of the multiplier type such as a single balanced detector.
Those, of course, produce more of the desirable signals and less of the useless
products that you just end up throwing away. There had to be something before
the 7360 type of detector.

Steve
WB4CZR

>
>
> "J M Noeding" <la8ak.xnd@online.no> wrote in message
> news:3c40db44.199925342@news.online.no...
> > Collecting information about receiver technique to use on my web site,
> > but I haven't found any proof when product detectors were used for the
> > first time.
> > A note in QST 1950 mentions the application of 6BE6, but it should
> > indicate that older types like 6K8 or 6SA7 has already been used.
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> >
> > Have QST on CD, but only the period 1950-1959 and few loose magazines
> > for the period 1947-1952, so I would be grateful if somebody could
> > send me a circuit diagram or article from before 1950 as gif file to
> > be used on my planned website on www.noding.com
> >

> > 73
> > Jan-Martin
> > LA8AK
> > --
> > remove ,xnd to reply

342. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 12:27:37 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <p9v24ugjn6jfavaa49av17td52hrjvbp6l@4ax.com>
Source record: 47334

The confusion of the two Wes's. Sorry about that.

Jack K8ZOA

343. WTB: Drake 1544/1548 for 7 line

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 14:24:09 UTC
From: k9sqg@aol.com
Message-ID: <20020113092409.26100.00001211@mb-bd.aol.com>
Source record: 47335

Looking for the 1544/1548 adaptor cable and box that allows one to transcieve the TR-7 with R-7 and RV-75. Need one more set to just about finish out my Drake 7 line collection.

Thanks for reading the posting.

Evan

344. Re: AM Antenna (Justice or Super Select-A-Tenna)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 15:11:37 UTC
From: Steve Fleckenstein <spfleck@citlinkdot.net>
Message-ID: <u438tf1b4g6c2e@corp.supernews.com>
Source record: 47336
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.broadcasti

If select-a-tenna is just a loop with a tuner why couldn't I just roll my
own from the junk box under the work bench ?

--

Fruitcakes, if well-wrapped and stored in airtight tins, are reputed to
remain enjoyable for as long as 25 years..
"Daniel Simpson" <dzan@qwest.net> wrote in message
news:u40o87k86h877@corp.supernews.com...
| I have a Mckay Dymek AM7 with a Terk antenna plug into it I would like
| better reception then what i am getting and have been looking at the
| Justice or Super Select-A-Tenna Does anybody have opinions on these
| models or other sugestions.
|
| Thank You
| Dan
|
|

345. CI-V programs for ICOM-706 MK II G

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 16:47:50 UTC
From: swatersjl@bv.com
Message-ID: <91956A749swatersjlbvcom@207.217.77.24>
Source record: 47337
Cross-posted to:
alt.ham-radio.hf,alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Freeware - one program to clear out the main 99
memories in this rig, another to load the
channels with frequencies contained in input
tables. Written in Q-Basic, QB included too.

Read more about it on Jim's web pages.
Follow links in the amateur radio section.
Top page:

http://home.earthlink.net/~jcswaters

Oh - my dog SmoKee has her own page here too.

Other items on my pages:
link to the office contact, MO and KS repeater
pages, a couple of kid-stories, blank log
book forms, "logbook page" of my QSOs.

Enjoy

73 - de WB0IXI

346. Re: CI-V programs for ICOM-706 MK II G

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 17:32:27 UTC
From: Tom2000 <tom2000@mindspring.com>
Message-ID: <b4h34uoht8bt2kvqku8dj73htoag47fh39@4ax.com>
Source record: 47338
Cross-posted to:
alt.ham-radio.hf,alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Sun, 13 Jan 2002 16:47:50 GMT, swatersjl@bv.com (Swaters, Jim) wrote:

>
>Read more about it on Jim's web pages.
>Follow links in the amateur radio section.
>Top page:
>
> http://home.earthlink.net/~jcswaters
>
>Oh - my dog SmoKee has her own page here too.
>
"You think of the major four food groups as beef, pork, beer, and jello
salad with marshmallows"

ROTFL!!!!

347. Re: With just a DVM and Inductance meter...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 17:58:40 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a1sivc$svfvs$1@ID-124126.news.dfncis.de>
Source record: 47340

Just measure the inductance of windings at a low frequency. Accuracy doesn't matter. The 455 xfmrs have much greater inductance.

--
****
Regards, Reg G4FGQ
Free Radio Modelling Programs
Http://www.g4fgq.com
****
Patrick <braincambre500@yahoo.com> wrote in message
news:85a87c6c.0201112246.40014101@posting.google.com...
> Hello all,
>
> I would like to know this:
>
> If a person took out all of the IF transformers in a salvaged AM/FM
> radio, is is possible he could find out which can would be the 455 kHz
> IF transformer by just using a DVM and an inductance meter? Color slugs
> sometimes don't agree with said frequencies.
>
> a friend, Patrick

348. DC metro area repair for Alpha 374A?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 17:59:08 UTC
From: Mike Barrett <zootv@mgfairfax.rr.com>
Message-ID: <MVj08.28783$6L1.4349723@typhoon.southeast.rr.com>
Source record: 47341
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Hi,
Is there anyone in the Washington, DC metro area who is good at fixing Alpha 374A's? I'm willing to go as far south as Richmond and as far north as Baltimore. A good friend of mine has a 374A that needs to be looked at. As soon as you hit the SSB switch, the TR relay chatters loud enough to wake the neighbors and the fuse blows. With the CW switch in, the unit will come on but the meter lights will switch to the transmit color after 3 or 4 minutes. We found a burned resistor and two diodes that seem to be allowing current to flow both ways on the power supply board. If you know what the problem is or have any suggestions as to how to fix it please pass them along. Otherwise, the name of someone who is good at fixing amps would be greatly appreciated.
Thanks,
Mike
N4NAL

349. Re: AM Antenna (Justice or Super Select-A-Tenna)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 18:15:29 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <59k08.469189$C8.34091936@bin4.nnrp.aus1.giganews.com>
Source record: 47339
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.broadcasti

You certainly can. Fancy (and expensive) antennas aren't very good and don't have any secrets in them, regardless of advertising hype.

A good antenna has to be large and installed in a clear, high place. No shortcuts work.

350. Overtone Crystal Filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 18:34:50 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u43kqa6tfuc741@corp.supernews.com>
Source record: 47342

I have read with great interest the subject of crystal filters currently going on in this ng, and have a collection of most of Hayward's papers and a few others.

What most of them are fairly silent on is how to design and build VHF (30-80 MHz.) crystal filters using 3rd or 5th overtone crystals. What is even more silent (and hence a bit scary) is that there are no REPORTS of people successfully building narrow to moderate bandwidth (5 to 20 kHz. bw) filters using overtone crystals.

Is there anybody that has a pointer to a good reference or report on overtone crystal filters?

Jim

351. Re: Overtone Crystal Filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 19:08:58 UTC
From: "Harold E. Johnson" <W4ZCB@Home.com>
Message-ID: <eXk08.49306$LQ1.14843103@news2.nash1.tn.home.com>
Source record: 47343

> Is there anybody that has a pointer to a good reference or report on
> overtone crystal filters?

Sorry, I haven't, Thanks however for chasing me back to Kinsman. I found something there well worth review.

It strikes me that there was something on overtone filters either in Microwave or in RF design in the last 24 months.

W4ZCB

352. Re: With just a DVM and Inductance meter...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 19:38:16 UTC
From: la8ak.xnd@online.no
Message-ID: <3c41dfaa.266597157@news.online.no>
Source record: 47344

On Sun, 13 Jan 2002 17:58:40 -0000, "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>Just measure the inductance of windings at a low frequency. Accuracy doesn't
>matter. The 455 xfmrs have much greater inductance.
>
>--
>**********
>Regards, Reg G4FGQ
>Free Radio Modelling Programs
>Http://www.g4fgq.com
>**********
>Patrick <braincambre500@yahoo.com> wrote in message
>news:85a87c6c.0201112246.40014101@posting.google.com...
>> Hello all,
>>
>> I would like to know this:
>>
>> If a person took out all of the IF transformers in a salvaged AM/FM
>> radio, is is possible he could find out which can would be the 455 kHz
>> IF transformer by just using a DVM and an inductance meter? Color slugs
>> sometimes don't agree with said frequencies.
>>
>> a friend, Patrick
>
>
Reg

is the common tuning capacitor still around 200pF - as it waf for
valve type IF transformers?

73
LA8AK
--
remove ,xnd to reply

353. Re: With just a DVM and Inductance meter...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 19:38:16 UTC
From: la8ak.xnd@online.no
Message-ID: <3c41e016.266705276@news.online.no>
Source record: 47345

On Sat, 12 Jan 2002 16:37:40 -0600, John O'Flaherty
<wewelcomespam@blackhole.net> wrote:

>Patrick wrote:
>>
>> Hello all,
>>
>> I would like to know this:
>>
>> If a person took out all of the IF transformers in a salvaged AM/FM
>> radio, is is possible he could find out which can would be the 455 kHz
>> IF transformer by just using a DVM and an inductance meter? Color slugs
>> sometimes don't agree with said frequencies.
>
>If you pry back the little metal tabs that hold the shielding can on,
>the difference between the 10.7 MHz and the 455 KHz should be obvious-
>there'll be less wire on the higher frequency ones.
>
>--
>john

IF transformers are quite easy to identify with a Q-meter or similar,
but the problem is all the different RF coils which looks like IF
coils, and you never find any references in price lists

--
remove ,xnd to reply

354. Re: Overtone Crystal Filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 20:16:25 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C41EB19.2EBAAA67@eznec.com>
Source record: 47346

I admit to great ignorance on this topic, so forgive me if my suggestion is naive. But wouldn't you just characterize the crystals at their overtone frequencies instead of fundamental frequencies and use the same basic procedure to design the filter?

At VHF, parasitics would play a larger role of course (and this might be a killer), and you might have problems with spurious responses due to the fundamental resonances -- although those should be far enough away that you could deal with them with another simpler filter. Another potential practical problem I see is that the crystal characteristics might be considerably less desirable at the overtones than at the fundamental.

Things are always much more simple before you've actually tried to do them, so undoubtedly I'm neglecting some substantial problems, maybe some show-stopping ones. I'd be interested in learning more about this, so I'm also looking forward to postings from people who've been there.

Roy Lewallen, W7EL

Jim Weir wrote:
>
> I have read with great interest the subject of crystal filters currently
> going on in this ng, and have a collection of most of Hayward's papers and a
> few others.
>
> What most of them are fairly silent on is how to design and build VHF (30-80
> MHz.) crystal filters using 3rd or 5th overtone crystals. What is even more
> silent (and hence a bit scary) is that there are no REPORTS of people
> successfully building narrow to moderate bandwidth (5 to 20 kHz. bw) filters
> using overtone crystals.
>
> Is there anybody that has a pointer to a good reference or report on
> overtone crystal filters?
>
> Jim

355. Re: ft 2600 modification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 20:27:47 UTC
From: Me <newuser@btinternet.com>
Message-ID: <a1sqk3$km0$1@paris.btinternet.com>
Source record: 47347

Try http://www.mods.dk

"gervais" <gfillio1@globetrotter.net> wrote in message
news:1oY%7.55775$qF2.5583655@carnaval.risq.qc.ca...
> hi,i am looking for a web page where i can find information about the
> modifictaion that i could perform on my ft2600
>
> any help will appreciated
>
> ve2ckn,gervais
>
>

356. Re: Overtone Crystal Filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 20:35:28 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <a1sr2f$m4n$1@paris.btinternet.com>
Source record: 47348

"Jim Weir" <jim@rst-engr.com> wrote in message
news:u43kqa6tfuc741@corp.supernews.com...
> I have read with great interest the subject of crystal filters currently
> going on in this ng, and have a collection of most of Hayward's papers and
a
> few others.
>
> What most of them are fairly silent on is how to design and build VHF
(30-80
> MHz.) crystal filters using 3rd or 5th overtone crystals. What is even
more
> silent (and hence a bit scary) is that there are no REPORTS of people
> successfully building narrow to moderate bandwidth (5 to 20 kHz. bw)
filters
> using overtone crystals.
>
> Is there anybody that has a pointer to a good reference or report on
> overtone crystal filters?

Some of the filter manufacturers seem to know how to do it, they make
'roofing' filters for up-conversion receivers well into the VHF region. It
would probably be a good idea to see if some overtone crystals could be
characterised at the overtone frequency and then doing some simulation.

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.con
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

357. loose connections

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 21:53:09 UTC
From: Kurt Stocklmeir <kurtstocklmeir@worldnet.att.net>
Message-ID: <01c19c75$ed0f63c0$b4264f0c@oemcomputer>
Source record: 47349

How can wires that are not connected completely create harmonics.

Thank you for any answers

358. Free IOTA List download - UPDATED - 13-Jan-02

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 21:58:14 UTC
From: Charles Johnston <ctj92@cableone.net>
Message-ID: <3c4202f6@news.bnb-lp.com>
Source record: 47350
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

The FREE IOTA List download has been updated as of 13-Jan-2002 and is
located on the IOTA List Page of the web site listed below.

available as text file -or- MS Word document

--

73 / DX

Charles T Johnston
Prescott, Arizona - U.S.A.
charles@ab7sl.com

AB7SL - Ham Radio Pages
Official W9INN Antennas Page
www.ab7sl.com

359. Re: loose connections

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 22:20:57 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <u4422gg2nlaob7@corp.supernews.com>
Source record: 47351

> How can wires that are not connected completely create harmonics.
>
Corrosion builds up between the wires and acts as a diode.

360. Re: loose connections

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 22:28:36 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C420A14.9399ECE6@eznec.com>
Source record: 47352

Harmonics are created any time a current flows through, or a voltage is applied to, a nonlinear circuit, because an applied sine wave (which consists of only one frequency) gets distorted. Any waveshape other than a pure sine wave contains more than one frequency. When the circuit is nonlinear, a sinusoidal voltage will produce a non-sinusoidal current, or a sinusoidal current a non-sinusoidal voltage. Nonlinear, in this case, means anything where the resistance doesn't stay constant for all values of current or voltage (the I vs V curve isn't a straight line). When wires are connected properly, there's direct metal-to-metal contact due either to soldering or to having enough pressure to break through any surface contamination and keep air and moisture from getting between the wires at the point of contact. But when poorly connected, air or moisture gets between the wires, and oxides form. Metal-to-oxide junctions are nonlinear, so can produce harmonics. The explanation of why a metal-to-oxide junction is nonlinear is, to me, complex. If you want to pursue that aspect, I recommend finding a book on solid state physics.

Roy Lewallen, W7EL

Kurt Stocklmeir wrote:
>
> How can wires that are not connected completely create harmonics.
>
> Thank you for any answers

361. Re: 2.4ghz bi-directional pre-amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 22:42:04 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C420DDB.771B@pop.removethistomailme.net>
Source record: 47353

Carl R. Stevenson wrote:
>
> Nope ... and modifying a Part 15 device would render
> its approval by the FCC void.
>
> Carl - wa6vse

Interestingly, though, an individual is allowed to build up to five "Part 15"-class devices without violating the law, as long as there is a snowball's chance in hell that the device is still Part 15-emissions compliant. Which is entirely possible, considering how underpowered most commercial 2.4 GHz devices seem to be.

An excerpt from the relevant FCC rules:

"ï¿½ 15.23 Home-built devices.

(a) Equipment authorization is not required for devices that are not marketed, are not constructed from a kit, and are built in quantities of five or less for personal use.
(b) It is recognized that the individual builder of home-built equipment may not possess the means to perform the measurements for determining compliance with the regulations. In this case, the builder is expected to employ good engineering practices to meet the specified technical standards to the greatest extent practicable. The provisions of Sec. 15.5 apply to this equipment."

The question is, what constitutes "home-built equipment?" I could argue that by gluing a MMIC amp onto an existing Part 15 transmitter, I've "created home-built equipment," rather than "modified commercial equipment." If that ad-absurdum example doesn't fly, what if I cannibalize the modulator chip from the commercial gear and build my own amp for it? Etc.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

362. 160 meter antenna, need suggestions, limited space

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 22:59:39 UTC
From: hexter@blazenet.net
Message-ID: <u444arcmcuej61@corp.supernews.com>
Source record: 47354

I have limited space for this 160 meter project. Also, I am interested in an antenna for local ground wave coverage as opposed to sky wave dx use. Is there such a thing as a 160mtr 'mobile vertical' such as the ham stick type antennas? I have heard of the 'snake' antenna, which I understand is nothing more than insulated wire laying on the ground. The intent here is that a few local hams and I want to get some 160m experience using old converted maritine AM units of perhaps 25w output power. Our problem on 80 mtrs seemed to be that we 'skipped' right out over each other. I could get good 5/9 reports from Florida at apprx 1200 miles away, and could barely hear my freinds of only 12 miles away.

Any suggestions? A beam simply isn't practicle, and I doubt I have room for a folded dipole, so I am thinking base loaded vertical here.

363. Re: Overtone Crystal Filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 23:01:37 UTC
From: Alan Melia <Alan.Melia@btinternet.com>
Message-ID: <a1t3kh$m9v$1@paris.btinternet.com>
Source record: 47355

On the basis that all crystals over about 23MHz are probably 'vibrating' on an overtone then I suppose a38 45 and 70 MHz filters must use this mode. I think the concentration on fundamental crystals has be due to the fact that you get narrower bandwidths most easily from the lower frequency crystals. The case for a roofing filter is a particular exception.

If I can remember aright there was a series of experiments done by Jack Hardcastle, G3IIR, reported in RSGB Radcom in the later 1970s or 1980s. I believe one of those considered the use of 35 or 38MHz units in a ladder format. I believe he did just what Roy suggested.
Try QST Nov 1980 as a start which has one of Jack's articles.

I hope that helps a bit. I may be able to find more information if you want to delve further.
Cheers de Alan G3NYK
Jim Weir wrote in message ...
>I have read with great interest the subject of crystal filters currently
>going on in this ng, and have a collection of most of Hayward's papers and
a
>few others.
>
>What most of them are fairly silent on is how to design and build VHF
(30-80
>MHz.) crystal filters using 3rd or 5th overtone crystals. What is even
more
>silent (and hence a bit scary) is that there are no REPORTS of people
>successfully building narrow to moderate bandwidth (5 to 20 kHz. bw)
filters
>using overtone crystals.
>
>Is there anybody that has a pointer to a good reference or report on
>overtone crystal filters?
>
>Jim
>
>
>
>

364. Re: Overtone Crystal Filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 23:13:05 UTC
From: n7ws@yahoo.com
Message-ID: <3c420db8.113350354@news.triconet.org>
Source record: 47356

On Sun, 13 Jan 2002 10:34:50 -0800, "Jim Weir" <jim@rst-engr.com> wrote:

|I have read with great interest the subject of crystal filters currently
|going on in this ng, and have a collection of most of Hayward's papers and a
|few others.
|
|What most of them are fairly silent on is how to design and build VHF (30-80
|MHz.) crystal filters using 3rd or 5th overtone crystals. What is even more
|silent (and hence a bit scary) is that there are no REPORTS of people
|successfully building narrow to moderate bandwidth (5 to 20 kHz. bw) filters
|using overtone crystals.
|
|Is there anybody that has a pointer to a good reference or report on
|overtone crystal filters?

Wes Hayward, in his June 1995 QEX article, briefly discusses (ladder) overtone crystal filters.

In most of the filters (fundamental and overtone) he discussed, he tunes out the parallel capacitance of the crystal using inductors. This is much as I described doing earlier while measuring crystals when I used a "mathematical" inductor.

I don't believe you could ever build an overtone (ladder) filter without doing this. As he also states, the motional inductance is essentially a constant, therefore, the motional capacitance will be only 1/9 of its fundamental value when the crystal operates at the third overtone. This then complicates the realization of the coupling capacitor values.

I don't know for certain but I would guess that VHF filters are lattice types.

Wes N7WS

365. Re: 2.4ghz bi-directional pre-amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 23:42:26 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C421B62.F8F1AB78@eznec.com>
Source record: 47357

If you just glue an MMIC into an existing part 15 transmitter, you're
not using good engineering practices to meet the specified technical
standards. But careful modeling or mathematical analysis to show that
the resulting device is still in compliance would probably be considered
good engineering practice under the circumstances.

Roy Lewallen, W7EL

John Miles wrote:
>
> Carl R. Stevenson wrote:
> >
> > Nope ... and modifying a Part 15 device would render
> > its approval by the FCC void.
> >
> > Carl - wa6vse
>
> Interestingly, though, an individual is allowed to build up to five
> "Part 15"-class devices without violating the law, as long as there is a
> snowball's chance in hell that the device is still Part 15-emissions
> compliant. Which is entirely possible, considering how underpowered
> most commercial 2.4 GHz devices seem to be.
>
> An excerpt from the relevant FCC rules:
>
> "ï¿½ 15.23 Home-built devices.
>
> (a) Equipment authorization is not required for devices that are not
> marketed, are not constructed from a kit, and are built in quantities of
> five or less for personal use.
> (b) It is recognized that the individual builder of home-built
> equipment may not possess the means to perform the measurements for
> determining compliance with the regulations. In this case, the builder
> is expected to employ good engineering practices to meet the specified
> technical standards to the greatest extent practicable. The provisions
> of Sec. 15.5 apply to this equipment."
>
> The question is, what constitutes "home-built equipment?" I could argue
> that by gluing a MMIC amp onto an existing Part 15 transmitter, I've
> "created home-built equipment," rather than "modified commercial
> equipment." If that ad-absurdum example doesn't fly, what if I
> cannibalize the modulator chip from the commercial gear and build my
> own amp for it? Etc.
>
> -- jm

>
> ---
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> ---

366. Re: 160 meter antenna, need suggestions, limited space

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-13 23:48:35 UTC
From: "Alexander S. Wood" <alec_wood@nospamplease.ntlworld.com>
Message-ID: <H1p08.14117$_x4.2077907@news2-win.server.ntlworld.com>
Source record: 47358

Pro-Am do a 160m vertical but bandwidth is very narrow.so do Watson. Price
of the Watson one is about 50GBP (US$75)

Alec M1BNK
"gudmundur" <hexter@blazenet.net> wrote in message
news:u444arcmcuej61@corp.supernews.com...
> I have limited space for this 160 meter project. Also, I am interested
> in an antenna for local ground wave coverage as opposed to sky wave dx
> use. Is there such a thing as a 160mtr 'mobile vertical' such as the
> ham stick type antennas? I have heard of the 'snake' antenna, which I
> understand is nothing more than insulated wire laying on the ground.
> The intent here is that a few local hams and I want to get some 160m
> experience using old converted maritine AM units of perhaps 25w output
> power. Our problem on 80 mtrs seemed to be that we 'skipped' right out
> over each other. I could get good 5/9 reports from Florida at apprx
> 1200 miles away, and could barely hear my freinds of only 12 miles away.
>
> Any suggestions? A beam simply isn't practicle, and I doubt I have room
> for a folded dipole, so I am thinking base loaded vertical here.
>

367. Calibrate A capacitor Standard

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 00:06:24 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C422100.6DA71A52@ieee.org>
Source record: 47359

Can anyone here either recommend an easy way to calibrate a standard capacitor,

Or is there a reader in the Boston Metro area that has access to a DigiBridge or suitable equipment?

Clyde

KA1CRV

368. Free stuff in Minneapolis

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 00:22:54 UTC
From: jstoute338@aol.comnocrud
Message-ID: <20020113192254.08046.00003794@mb-bk.aol.com>
Source record: 47360

Email reply only to Jstoute338@aol.com

I've got some electronics hobby stuff I'm giving away to anybody willing to come get it.

There's two short 19 inch wide instrument cabs, coils, vernier knobs, various cables and connectors, switches, a couple of wire wrap IC panels, Heathkit antenna tuner, power supplies, microphones, a Pioneer FM tuner.

Its too good to just throw out without at least offering it to somebody. If no reply in 2 weeks from 01/13/02 I'll toss it.

369. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 01:35:17 UTC
From: Gary Schafer <gschafer@mediaone.net>
Message-ID: <3C423535.3D41F05C@mediaone.net>
Source record: 47361
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Gary Coffman wrote:

> On Sat, 12 Jan 2002 06:10:06 -0600, "William E. Sabin" <sabinw@mwci.net> wrote:
> >Gary Coffman wrote:
> >> As you say, *all* of these spurious products are integrated by the receiver.
> >> Reducing any one of them improves matters. In other words, you can't output
> >> a cleaner signal than is input, so you want to start with the cleanest practical
> >> input. Attacking every source of spurious after the modulator can improve
> >> matters even more.
> >
> >
> >This discussion, for me, pertains only to Amateur
> >Radio. In this environment, economics and the
> >cost-of-ownership (already quite high for many,
> >which is probably why QRP and boatanchors are so
> >popular) do not lead to extremely low levels of
> >out-of-band emissions from the transmitter (due to
> >all causes) or extremely low levels of
> >susceptibility (due to all causes) in the receiver.
>
> I don't think economics plays much of a role for most people
> in the decision to operate boatanchors or to homebrew. I think
> that cost sensitivity is more of an issue for manufacturers of
> mass produced new equipment. In any event, the DSP I/Q
> modulator approach has become the cheaper alternative to
> a good quality filter type modulator.
>
> The use of higher linearity PAs remains something of a daunting
> problem for the users of *any* type of SSB modulator. A high linearity
> PA remains either complex or inefficient compared to the methods
> ordinarily used by amateurs. But it is something that amateurs should
> be considering in today's crowded conditions. It can be achieved.
>
> >Despite the so-called Hi-Fi SSB clique who want to
> >hear 15 Hz (all of which is nonsense, in my
> >personal opinion), amateur SSB is a voice comm
> >mode in which 300 to 3000 Hz is, and should be,
> >the desired band. Frequencies outside that range
> >can, and should be, attenuated very considerably.
>
> I don't disagree, but people use SSB type transmitters
> for other things than voice communications. So the
> advantage of better sideband suppresssion at the

> lower modulating frequencies is a nice benefit, as is
> the ability to directly generate other modulation forms.
> And there's no cost penalty to be paid for those features.
>
> >As a practical matter, filter rigs that use high
> >quality filters (xmit and rcv) provide out-of-band
> >quality that is more than adequate, considering
> >the *entire* picture. It isn't true that there is
> >only "one way to go" and all other ways are "just
> >plain dumb".
>
> I agree with you there too. I was just pointing out
> that the DSP phasing approach can match or better
> the performance of a good filter modulator, and can
> cost less too. Better *and* cheaper is a hard
> combination to beat.
>
> Also, the DSP approach eliminates the concerns
> about temperature sensitivity and component
> variations that plague the analog phasing approach.
> It can't get "out of adjustment". The phasing approach
> almost dropped out of sight for years because of those
> problems, but a DSP I/Q modulator solves them. This
> has little application for the boatanchor operator, but
> it should be of interest to the homebrewer.
>
> Gary

This old business of accepting the 300 to 3000 hz bandwidth as the "ideal communications bandwidth" I think is just that. Old. This is a carryover from the old telephone days when it was easier to limit the bandwidth to avoid some of the problems of transmission. Also most SSB rigs suffer some of the same problems. Especially limiting the lower frequencies. The old phasing rigs had problems maintaining a constant phase shift at low frequencies. How to correct for the problem, limit the low frequencies. Filter rigs have some of the same problems with side band suppression at low frequencies. This so called "communications quality audio that most rigs have is really next to awful audio. Especially when some of them are further degraded with limited range microphones. Some of the signals on the air make your ears bleed let alone hardly being intelligible. I think it is time and the technology is available that we can have much better sounding signals and still be well restricted in channel occupied width. There are so many really distorted transmitters on the air from poor audio processing to poor amplifier performance.
DSP seems that it would solve a lot of the common problems.

Gary, I wonder if you have experience with transmitting SSB with carrier. Sounds like you have a connection to Harris. What do they do in the transmitter to keep the distortion down in a common receiver with a diode detector receiving the SSB AM signal. As I am sure you know when you run a significant amount of modulation percentage the distortion gets quite high in this mode. Approaches 25% I believe at 100%

Regards
Gary

370. Re: Product detector for communications receiver ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 02:51:40 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <a1thc8$s87$1@slb3.atl.mindspring.net>
Source record: 47362

Steve:

Ah... vacuum mulitpliers! Sigh!

What did the world do when the last 7360 was manufactured?

I often thought that one should be able to make a similar kind of solid state device using MOSFET technologies.

i.e. a MOSFET with one source and two drains, and a gate geometry that forces the carriers to switch channels. Probably worth a patent applications don't you think?

Then there are the modern Gilbert multipliers and other such "long tail" semiconductor circuits that work just fine... so don't pine for 7360.

Best,

--Peter K1PO

"carltons" <motsteve@mediaone.net> wrote in message news:motsteve-1301020600470001@dplane-176-88-250.pompano.net...
> In article <a1r1hf$ue2$1@nntp9.atl.mindspring.net>, "Peter O. Brackett"
> <ab4bc@ix.netcom.com> wrote:
>
> > Jan:
> >
> > It all depends upon your definition of "product detector".
> >
> > My definition is that a product detector is a device whose output contains
> > at least one componen that represents the "product" (i.e. the
> > multiplication) of the incoming signal and a locally generated carrier.
> > This is a functional definition, of what a product detector does, not how it
> > does it.
> >
> > If you use the above definition, product detectors are probably very very
> > very old... i.e. even a diode pumped with a local BFO fills the bill.
> >
> > --Peter K1PO
>
>
> Peter,
>
> I also thought that maybe Jan-Martin was looking for any "mixer" type of

> detector, but then I thought that maybe he wanted the other types of
detectors
> which are more of the multiplier type such as a single balanced detector.
> Those, of course, produce more of the desirable signals and less of the
useless
> products that you just end up throwing away. There had to be something
before
> the 7360 type of detector.
>
> Steve
> WB4CZR
>
>
>
>
>
>
>
> >
> >
> > "J M Noeding" <la8ak.xnd@online.no> wrote in message
> > news:3c40db44.199925342@news.online.no...
> > > Collecting information about receiver technique to use on my web site,
> > > but I haven't found any proof when product detectors were used for the
> > > first time.
> > > A note in QST 1950 mentions the application of 6BE6, but it should
> > > indicate that older types like 6K8 or 6SA7 has already been used.
> > > Some early German application uses ACH1 (triode hexode)
> > >
> > > Have QST on CD, but only the period 1950-1959 and few loose magazines
> > > for the period 1947-1952, so I would be grateful if somebody could
> > > send me a circuit diagram or article from before 1950 as gif file to
> > > be used on my planned website on www.noding.com
> > >
> > > 73
> > > Jan-Martin
> > > LA8AK
> > > --
> > > remove ,xnd to reply

371. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 04:35:43 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <a1tncu$v7i$1@slb1.atl.mindspring.net>
Source record: 47363
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

----- Original Message -----
From: "Gary Schafer" <gschafer@mediaone.net>
>
> This old business of accepting the 300 to 3000 hz bandwidth
> as the "ideal communications bandwidth" I think is just that.
> Old. This is a carryover from the old telephone days when it
> was easier to limit the bandwidth to avoid some of the problems
> of transmission.

>> SNIP <<

While I agree that it is an "old business" I think it does fit in the general regulation that amateur radio systems use the minimum practical bandwidth while communicating to avoid interfering with other people.

Which is part of why they dropped AM transmitting and limited FM to 5 kHz...

Now, in real terms, the difference between 300-3K as compared to 10-10K is fairly substantial so I think limiting the upper frequency limit to something like 3K is a good idea since that would allow one or two other people to transmit without interference.

However, reducing the distortion in the signal being transmitted is a completely separate issue and I think it has more to do with equipment being badly designed and misused by audio compressors, driving some stage in non-linearity, and so on.

Jim Pennell
N6BIU

372. Re: Overtone Crystal Filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 04:41:24 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <a1tnrp$m3j$1@slb5.atl.mindspring.net>
Source record: 47364

Jim Weir wrote:
>
> What most of them are fairly silent on is how to design and build VHF
(30-80
> MHz.) crystal filters using 3rd or 5th overtone crystals. What is even
more
> silent (and hence a bit scary) is that there are no REPORTS of people
> successfully building narrow to moderate bandwidth (5 to 20 kHz. bw)
filters
> using overtone crystals.
>
> Is there anybody that has a pointer to a good reference or report on
> overtone crystal filters?
>

Well, I did a 50 MHz crystal filter once which worked well enough but it was VERY narrowband. I was stripping some spurs off of a multiplied 5 MHz reference input.

The main thing I recall was I had to use tuned circuits to force the main RF to the overtone mode but beyond that I don't know what it would take to make a reasonable SSB bandwidth.

A lot of the 'roofing' filters I have seen are monolithic filters, with three separate plates on the same quartz crystal, which is 'way beyond anything I'd want to try to build...

Jim Pennell
N6BIU

373. Re: With just a DVM and Inductance meter...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 05:56:51 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <3C4272BF.5BE541F@flash.net>
Source record: 47365

Hi,
Just to give another opinion, I don't think you could tell using an inductance meter. All the 455kHz filters I've ever played with had internal resonating caps. I don't think most inductance meters would measure inductance of such an arrangement; certainly not AADE's nice inductance meter, which varies the oscillator frequency in its measuring scheme.
Steve

Patrick wrote:
>
> Hello all,
>
> I would like to know this:
>
> If a person took out all of the IF transformers in a salvaged AM/FM
> radio, is is possible he could find out which can would be the 455 kHz
> IF transformer by just using a DVM and an inductance meter? Color slugs
> sometimes don't agree with said frequencies.
>
> a friend, Patrick

374. Re: Which Came First?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 06:08:54 UTC
From: Charles Fregeau <n5hsr@sprynet.com>
Message-ID: <3C4275F6.AB1F62CB@sprynet.com>
Source record: 47366
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Coming at it from both the Ham perspective and Broadcasting perspective:

KDKA was assigned 360 meters in 1920. As the number of stations grew, the band was expanded to 550-1500 kc. The hams, which were theoretically licensed to 200 meters (1500 kc) and theoretically only 200 meters, had some special licenses which went down to nearly 1350 kcs before the broadcast explosion, but at about the time broadcasting started needing a lot more space, i.e. 1923, the hams discovered short-wave, and ceased to need the longer frequencies. This was all somewhat suggestive, as the Department of Commerce had no real power to regulate frequencies until the Communications Act of 1927 placed such power in the hands of the Federal Radio Commission, the predecessor of the FCC. 1510-1600 was not added until the '30's, after the hams had vacated the frequencies, through an international shift in allocations by a treaty signed in 1927. 540 kc was not added until, I think, the 1947 Atlantic Conference. This would have been about the same time FM was shifted to 88-108 Mcs in the Americas.

So the hams had 1500 and up from 1912 until 1923, when a voluntary band plan gave them several bands, the first of which ran from 1500 to 2000 kcs until 1927, when it changed to 1715 to 2000 kcs. The AM band could not pass 1500 prior to 1927, as the 1912 law assigned 200 meters to Amateur Radio, and law outranks mere regulation. After the 1927 law was passed, the FRC had somewhat more latitude to assign frequencies, and the 200 meter restriction for hams was removed from the law at that time. Between the FRC's reorganization of the radio stations, now that it had the authority to do so, and the Depression, 550 to 1500 was sufficient for a good while. The original purpose of stations in the 1500's was to provide high fidelity sound, and were originally spaced 20 kcs apart. You must remember FM was only a laboratory experiment at the time this was going on.

I've studied this issue from both sides, having read both the League's 50th anniversary publication and 200 Meters and Down (reprint) and having a father who was in broadcasting for a good number of years. I also took broadcasting in college, hoping to follow in my father's footsteps.

In short, the answer was, serendipity. As the broadcasting band needed to expand, the technology became available to move hams into a different area of the spectrum, and to allow the broadcast stations to also broadcast closer together as well, as well as better receivers for those who listened to either group. Hams stumbled onto short-wave purely by accident. The engineers of that day said that anything above 1500 kcs

was totally useless, so no one had experimented much with it until about 1922.

Charles N5HSR/9

Al Lorona wrote:
>
> I'm just curious: is it correct to assume that the current AM broadcast
> band is really the best choice of frequency for the desired
> characteristics for that service? In other words, was 540-1600 kHz
> (before expansion to 'AM wide' a few years ago) chosen first, and then
> the stations placed there? Or did the stations begin operation in that
> frequency band and just happened to choose a good ground wave frequency
> band for local broadcasting?
>
> I've been reading some of the history of KDKA, which of course was the
> first commercial broadcast station in Pittsburgh in 1920 (on 360 meters,
> according to the original FCC license), and it seems that the
> Westinghouse engineers knew that starting around 1500 kHz ground losses
> increased, making those frequencies less useful for local reception.
> (They apparently didn't know about sky wave propagation). But aside from
> that, is there anything magical about the current broadcast band that
> makes it the best choice?
>
> Thanks,
>
> Al W6LX

375. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 06:44:44 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <3oq44ugupb2gcoebsffq47e870njucrtcd@4ax.com>
Source record: 47367
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

On Mon, 14 Jan 2002 01:35:17 GMT, Gary Schafer <gschafer@mediaone.net>
wrote:

>Gary, I wonder if you have experience with transmitting SSB with carrier. Sounds like
>you have a connection to Harris. What do they do in the transmitter to keep the
>distortion down in a common receiver with a diode detector receiving the SSB AM signal.

According to short wave listening tests by Radio Finland a few years
ago, in single sideband attenuated carrier (R3E) transmissions, the
carrier could be attenuated by -6 dB, without too much problems for
simple diode detector radios. If the carrier was attenuated by -12 dB,
a receiver with a BFO should be used.

Paul OH3LWR

376. Direct generation of PSK31

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 09:29:17 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c429b11.2154743@news.freeserve.net>
Source record: 47368

HI Folks,
Is there a method to generate a PSK31 signal without the complication of an SSB transmitter modulated with the PSK audio. Perhaps by direct modulation of the VFO in an AM/CW TX ?.
cheers Mike W, G8NXD

377. Re: 160 meter antenna, need suggestions, limited space

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 10:22:11 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <jgbu1a.hv.ln@my.linux.box>
Source record: 47373

In article <u444arcmcuej61@corp.supernews.com>, gudmundur wrote:

> Any suggestions? A beam simply isn't practicle, and I doubt I have room
> for a folded dipole, so I am thinking base loaded vertical here.

Try an inverted-L. Mine is 30M (100ft) long. The vertical part is
10M, the horizontal part is 20M. A longer wire would be better but
it wouldn't fit in my small garden. You will need a good ground -
I use several radials (random length), 6 earth rods and a buried VW
Diesel engine (for extra torque).

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

378. Re: Overtone Crystal Filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 10:49:02 UTC
From: Martin Farrell <Martin@hobbit.demon.co.uk>
Message-ID: <ujKhMyFeerQ8Ew$o@hobbit.demon.co.uk>
Source record: 47369

>Is there anybody that has a pointer to a good reference or report on
>overtone crystal filters?

Jim, there was an article by Gï¿½rard Lagier F6EHJ in the French Megahertz magazine (number 223 October 2001) on a practical approach to the design and methodology of producing 36MHz ladder filters. He has developed some 'rules on thumb' for producing Chebyshev and Cohn configurations of SSB and CW filters.

F6EHJ@wandoo.fr
http://www.megahertz-magazine.com

--
Martin G8ASG

379. Re: Direct generation of PSK31

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 10:54:02 UTC
From: Graeme Zimmer <gzimmer@optushome.com.au>
Message-ID: <3c42b80b$0$16822$afc38c87@news.optusnet.com.au>
Source record: 47370

> Is there a method to generate a PSK31 signal without the complication
> of an SSB transmitter modulated with the PSK audio. Perhaps by direct
> modulation of the VFO in an AM/CW TX ?.
> cheers Mike W, G8NXD

http://members.optushome.com.au/gzimmer/default.html

.... Zim

380. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 10:56:52 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C42B974.A1DED9D6@eznec.com>
Source record: 47371
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I've read numerous times that a good deal of speech power is in the
lower frequencies, yet very little information. If this is true, then
the average and probably peak power can be reduced significantly,
without any real sacrifice in intelligibility, by limiting the low
frequency response. I've always thought this was one of the main
reasons, if not the main reason, for limiting low frequency response for
communications. If you want to sound pretty, boost that bass. If all you
want to do is communicate the farthest with a given amount of power,
roll it off.

I'll defer to the experts if anyone has a good source of contradictory
information.

Roy Lewallen, W7EL

Gary Schafer wrote:
>
> This old business of accepting the 300 to 3000 hz bandwidth as the "ideal
> communications bandwidth" I think is just that. Old. This is a carryover from the old
> telephone days when it was easier to limit the bandwidth to avoid some of the problems
> of transmission. Also most SSB rigs suffer some of the same problems. Especially
> limiting the lower frequencies. The old phasing rigs had problems maintaining a
> constant phase shift at low frequencies. How to correct for the problem, limit the low
> frequencies. Filter rigs have some of the same problems with side band suppression at
> low frequencies. This so called "communications quality audio that most rigs have is
> really next to awful audio. Especially when some of them are further degraded with
> limited range microphones. Some of the signals on the air make your ears bleed let
> alone hardly being intelligible. I think it is time and the technology is available
> that we can have much better sounding signals and still be well restricted in channel
> occupied width. There are so many really distorted transmitters on the air from poor
> audio processing to poor amplifier performance.
> DSP seems that it would solve a lot of the common problems.
>
> Gary, I wonder if you have experience with transmitting SSB with carrier. Sounds like
> you have a connection to Harris. What do they do in the transmitter to keep the
> distortion down in a common receiver with a diode detector receiving the SSB AM signal.
> As I am sure you know when you run a significant amount of modulation percentage the
> distortion gets quite high in this mode. Approaches 25% I believe at 100%
>
> Regards
> Gary

381. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 11:09:55 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C42BC83.D48C107C@eznec.com>
Source record: 47372
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

A followup to a posting I made a short time ago. . .

From Terman, _Radio Engineering_, Third Edition, p. 738:

"The low modulation frequencies are sometimes reduced in relative amplitude, or entirely eliminated, in radio systems designed to transmit speech where the emphasis is on intelligibility rather than naturalness. Such discrimination against the lower speech frequencies reduces greatly the total audio-frequency energy that must be handled, and so makes it possible to increase the degree of modulation for the more important frequencies. The loss in intelligibility is small, the gain in signal-to-noise ratio considerable."

Roy Lewallen, W7EL

382. Re: Direct generation of PSK31

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 11:14:55 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <fjeu1a.f01.ln@my.linux.box>
Source record: 47374

In article <3c429b11.2154743@news.freeserve.net>, Mike W wrote:
> HI Folks,
> Is there a method to generate a PSK31 signal without the complication
> of an SSB transmitter modulated with the PSK audio. Perhaps by direct
> modulation of the VFO in an AM/CW TX ?.
> cheers Mike W, G8NXD

It should work fine. You will need very good frequency/phase
stability. Frequency modulating a free-running VFO will not
be good enough.

73, Ed. EI9GQ.
--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

383. Re: Direct generation of PSK31

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 14:07:15 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <rEB08.15389$WQ1.2499555@news6-win.server.ntlworld.com>
Source record: 47375

> > Is there a method to generate a PSK31 signal without the complication
> > of an SSB transmitter modulated with the PSK audio. Perhaps by direct
> > modulation of the VFO in an AM/CW TX ?.
> > cheers Mike W, G8NXD
>
> It should work fine. You will need very good frequency/phase
> stability. Frequency modulating a free-running VFO will not
> be good enough.
=======
An single xtal oscillator/tx and a not too narrow bandwidth rx (SSB is customary on HF but not essential) is all that's needed for the PC soundcard to perform PSK 31 , The software enables comms over a number of adjacent channels.
Example : DAT20 transceiver from (Sheldon ,MW0ELR) Hands Electronics ,see SPRAT -Spring 2001 ,pages 21 - 25.

Frank gm0csz.kn6wh@ntlworld.com

384. Antenna Matching Advice Needed (Homebrew Mobile Tuner)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 14:46:41 UTC
From: littlejohn42@mailcity.com
Message-ID: <97169496.0201140646.10bab690@posting.google.com>
Source record: 47376
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

In my mobile I am currently running a 102" whip antenna on 10m which works fine. However, I would like to be able to use it on 12m as well. What I would like to do is to homebrew a fixed L/C tuner (pre-tuned for the middle of the 12m band) that I can just switch in when I want to work 12m, and out when I want to work 10m with no knobs to fiddle with. It also needs to handle around 400 watts. I would like to wind my own inductor etc. for it so I would need the coil dimensions, value of C, a schematic to see how this would all go together would also be extremely helpful (this is my first project of this sort). Any assistance anyone can offer is greatly appreciated.

73.
JW

385. Re: Antenna Matching Advice Needed (Homebrew Mobile Tuner)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 15:04:30 UTC
From: CAM <Cecil.A.Moore@IEEE.org>
Message-ID: <3C42F37E.DB47559C@IEEE.org>
Source record: 47377
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

John Wallace wrote:
> In my mobile I am currently running a 102" whip antenna on 10m which works fine.
> However, I would like to be able to use it on 12m as well. What I would like to
> do is to homebrew a fixed L/C tuner (pre-tuned for the middle of the 12m band)
> that I can just switch in when I want to work 12m, and out when I want to work
> 10m with no knobs to fiddle with. It also needs to handle around 400 watts. I
> would like to wind my own inductor etc. for it so I would need the coil
> dimensions, value of C, a schematic to see how this would all go together would
> also be extremely helpful (this is my first project of this sort). Any
> assistance anyone can offer is greatly appreciated.

This is pretty much a nobrainer assuming you have an antenna analyzer
like the MFJ259. All you need is one series coil (no capacitor) between
the center wire of the coax and the whip feedpoint. Wind the coil and
test with the analyzer. If the resonant frequency is too low, take turns
off the coil and if the resonant frequency is too high, put turns on the
coil. About 4-5 turns on a two inch diameter coil form should do it.
--
cheers, CAM http://www.qsl.net/w5dxp

386. Re: 160 meter antenna, need suggestions, limited space

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 15:33:11 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <u45uiu91q6br27@corp.supernews.com>
Source record: 47378

Wire antennas are cheap, and as such amenable to experimentation.
Ladder line fed loops with a tuner?
Balloon-supported long wires?
What are your constraints? Can you make a really good earth ground?
An AM broadcast tower might have 180 buried copper wire radials 1/4 wavelength long with an additional 180 radials half that length with copper strap in a circle connecting all 360 radials; Or some similar construction.
H.
WA5IGW

gudmundur <hexter@blazenet.net> wrote in message news:u444arcmcuej61@corp.supernews.com...
> I have limited space for this 160 meter project. Also, I am interested
> in an antenna for local ground wave coverage as opposed to sky wave dx
> use. Is there such a thing as a 160mtr 'mobile vertical' such as the
> ham stick type antennas? I have heard of the 'snake' antenna, which I
> understand is nothing more than insulated wire laying on the ground.
> The intent here is that a few local hams and I want to get some 160m
> experience using old converted maritine AM units of perhaps 25w output
> power. Our problem on 80 mtrs seemed to be that we 'skipped' right out
> over each other. I could get good 5/9 reports from Florida at apprx
> 1200 miles away, and could barely hear my freinds of only 12 miles away.
>
> Any suggestions? A beam simply isn't practicle, and I doubt I have room
> for a folded dipole, so I am thinking base loaded vertical here.
>

387. Replace XTAL Filter Help pse

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 15:37:29 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c42f9d8.26421682@news.freeserve.net>
Source record: 47379

I'm wishing to replace an existing discrete xtal filter with a KVG9
SSB filter.
the existing filter circuit is shown in the drawing at

www.corn2.freeserve.co.uk\filter.gif

can I just remove everything between the 0.01 caps and fit the KVG
filter between them, or should I add matching as well?, if so what
would you reccomend ?.
your comments appreciated.
Thanks Mike W, G8NXD

388. Re: With just a DVM and Inductance meter...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 15:55:16 UTC
From: "Kenneth D. Grimm, K4XL" <kgrimm@adelphia.invalid>
Message-ID: <smv54u4t02cc34hpisiojjht27mgq1s9ei@4ax.com>
Source record: 47380

```
>> If a person took out all of the IF transformers in a salvaged AM/FM
>> radio, is is possible he could find out which can would be the 455 kHz
>> IF transformer by just using a DVM and an inductance meter? Color slugs
>> sometimes don't agree with said frequencies.

As a matter of curiosity, does anyone know the color code used on the
slugs of IF transformers? Is there a standard, or as implied above,
is there no rhyme or reason?

Ken K4XL - Replace "invalid" with "net" to reply.
*** BoatAnchor Manual Archive ***
On the web at http://bama.sbc.edu or
FTP site info: bama.sbc.edu login: anonymous p/w: youremailadr
```

389. Re: Calibrate A capacitor Standard

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 16:03:48 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a1v1ld$tgfod$1@ID-124126.news.dfncis.de>
Source record: 47381

Isn't the Standard Capacitor used to calibrate the bridge ?

390. Re: With just a DVM and Inductance meter...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 16:15:57 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a1v1lh$tgfod$2@ID-124126.news.dfncis.de>
Source record: 47382

```
> is the common tuning capacitor still around 200pF - as it waf for
> valve type IF transformers?
=========================
Yes, anywhere between 50 and 300 pF.

To inspect the capacitors it is necessary to remove transformers from
screening cans. But having removed the can, don't bother looking at the
capacitors, just take one look at the coils.

This is a spoof question.
---
Reg
```

391. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 17:09:15 UTC
From: Gary Schafer <gschafer@mediaone.net>
Message-ID: <3C43101B.B019316B@mediaone.net>
Source record: 47383
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Jim Pennell wrote:

> ----- Original Message -----
> From: "Gary Schafer" <gschafer@mediaone.net>
> >
> > This old business of accepting the 300 to 3000 hz bandwidth
> > as the "ideal communications bandwidth" I think is just that.
> > Old. This is a carryover from the old telephone days when it
> > was easier to limit the bandwidth to avoid some of the problems
> > of transmission.
>
> >> SNIP <<
>
> While I agree that it is an "old business" I think it does fit in the
> general regulation that amateur radio systems use the minimum practical
> bandwidth while communicating to avoid interfering with other people.
>
> Which is part of why they dropped AM transmitting and limited FM to 5
> kHz...

AM is still alive and well and is growing in popularity. The newer format for FM is 2.5 khz deviation.
SSB can be transmitted in even a narrower that 300 to 3000 hz bandwidth but readability suffers even more. What I am saying is that there is better technology available today to have better fidelity and still not be broad banded.

73
Gary K4FMX

>
>
> Now, in real terms, the difference between 300-3K as compared to 10-10K
> is fairly substantial so I think limiting the upper frequency limit to
> something like 3K is a good idea since that would allow one or two other
> people to transmit without interference.
>
> However, reducing the distortion in the signal being transmitted is a
> completely separate issue and I think it has more to do with equipment being
> badly designed and misused by audio compressors, driving some stage in
> non-linearity, and so on.
>
> Jim Pennell
> N6BIU

392. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 17:23:53 UTC
From: Gary Schafer <gschafer@mediaone.net>
Message-ID: <3C431389.EF75AA6@mediaone.net>
Source record: 47384
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I agree with what you say. However many of the rigs carry it to extremes to where they sound
awful. In an audio system if clipping is used to increase the average power level the low frequencies must be limited to avoid considerable distortion. However after the clipping circuit there needs to be good low frequency response in order to preserve the clipped audio
and not have overshoot. The high frequencies were normally rolled off to get rid of some of the distortion products produced by the clipping. This of course was done on a lot of the AM
rigs in the past.
With the SSB rigs things get limited by the filters that are used. Limiting the bandwidth does allow for more power in the mid band range but often times at a severe sacrifice in intelligibility. Probably 90% of the conversations on the ham bands are not taking place where you need every ounce of mid band power. I think most rigs could sound much better and still be just as useful.

But there are ways to accomplish these same enhancements these days without the serious band
limiting that has been done.

73
Gary K4FMX

Roy Lewallen wrote:

> I've read numerous times that a good deal of speech power is in the
> lower frequencies, yet very little information. If this is true, then
> the average and probably peak power can be reduced significantly,
> without any real sacrifice in intelligibility, by limiting the low
> frequency response. I've always thought this was one of the main
> reasons, if not the main reason, for limiting low frequency response for
> communications. If you want to sound pretty, boost that bass. If all you
> want to do is communicate the farthest with a given amount of power,
> roll it off.
>
> I'll defer to the experts if anyone has a good source of contradictory
> information.
>
> Roy Lewallen, W7EL
>
> Gary Schafer wrote:
> >
> > This old business of accepting the 300 to 3000 hz bandwidth as the "ideal
> > communications bandwidth" I think is just that. Old. This is a carryover from the old

> > telephone days when it was easier to limit the bandwidth to avoid some of the problems
> > of transmission. Also most SSB rigs suffer some of the same problems. Especially
> > limiting the lower frequencies. The old phasing rigs had problems maintaining a
> > constant phase shift at low frequencies. How to correct for the problem, limit the low
> > frequencies. Filter rigs have some of the same problems with side band suppression at
> > low frequencies. This so called "communications quality audio that most rigs have is
> > really next to awful audio. Especially when some of them are further degraded with
> > limited range microphones. Some of the signals on the air make your ears bleed let
> > alone hardly being intelligible. I think it is time and the technology is available
> > that we can have much better sounding signals and still be well restricted in channel
> > occupied width. There are so many really distorted transmitters on the air from poor
> > audio processing to poor amplifier performance.
> > DSP seems that it would solve a lot of the common problems.
> >
> > Gary, I wonder if you have experience with transmitting SSB with carrier. Sounds like
> > you have a connection to Harris. What do they do in the transmitter to keep the
> > distortion down in a common receiver with a diode detector receiving the SSB AM signal.
> > As I am sure you know when you run a significant amount of modulation percentage the
> > distortion gets quite high in this mode. Approaches 25% I believe at 100%
> >
> > Regards
> > Gary

393. Re: 160 meter antenna, need suggestions, limited space

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 17:36:28 UTC
From: "John S. MacKay" <k35454@direct.ca>
Message-ID: <faF08.10077$dc.1492433@brie.direct.ca>
Source record: 47388

Use a loading coil near the far end, not at the base.

--
CERTIFIED 100 % ANTHRAX FREE
Eamon Skelton <Xnospam@oceanfree.net> wrote in message
news:jgbu1a.hv.ln@my.linux.box...
> In article <u444arcmcuej61@corp.supernews.com>, gudmundur wrote:
>
>
> > Any suggestions? A beam simply isn't practicle, and I doubt I have room
> > for a folded dipole, so I am thinking base loaded vertical here.
>
> Try an inverted-L. Mine is 30M (100ft) long. The vertical part is
> 10M, the horizontal part is 20M. A longer wire would be better but
> it wouldn't fit in my small garden. You will need a good ground -
> I use several radials (random length), 6 earth rods and a buried VW
> Diesel engine (for extra torque).
>
> 73, Ed. EI9GQ.
>
> --
> Remove 'X' to reply.
> http://homepage.eircom.net/~ei9gq
> Linux 2.4.17

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.314 / Virus Database: 175 - Release Date: 1/11/2002

394. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 17:37:55 UTC
From: "William E. Sabin" <sabinw@mwci.net>
Message-ID: <3C431773.3000601@mwci.net>
Source record: 47385
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

William E. Sabin wrote:

> Gary Coffman wrote:
>
>
>> As you say, *all* of these spurious products are integrated by the
>> receiver. Reducing any one of them improves matters. In other words,
>> you can't output
>> a cleaner signal than is input, so you want to start with the cleanest
>> practical
>> input. Attacking every source of spurious after the modulator can
>> improve matters even more.
>
>
>
> This discussion, for me, pertains only to Amateur Radio. In this
> environment, economics and the cost-of-ownership (already quite high for
> many, which is probably why QRP and boatanchors are so popular) do not
> lead to extremely low levels of out-of-band emissions from the
> transmitter (due to all causes) or extremely low levels of
> susceptibility (due to all causes) in the receiver.
>
> The receiver, tuned to the LSB, is an equal contributor to the LSB
> garbage because of its reciprocal mixing and its selectivity (which
> extends somewhat into the high-energy USB channel).
>
> Despite the so-called Hi-Fi SSB clique who want to hear 15 Hz (all of
> which is nonsense, in my personal opinion), amateur SSB is a voice comm
> mode in which 300 to 3000 Hz is, and should be, the desired band.
> Frequencies outside that range can, and should be, attenuated very
> considerably.
>
> The receiver cannot be ignored in the system analysis. It is just as
> important to the total "channel" as the transmitter.
>
> Also, in transmitter or receiver, DSP is (and will be for a long time
> except for flea power systems) far removed from the antenna, and that
> provides a lot of opportunities for degradation of the signal, transmit
> or receive. I am familiar with the sales pitch for DSP, and that is OK,
> but like so many things it has been hyped beyond its *real* value.
>
> As a practical matter, filter rigs that use high quality filters (xmit
> and rcv) provide out-of-band quality that is more than adequate,

> considering the *entire* picture. It isn't true that there is only "one
> way to go" and all other ways are "just plain dumb".
>
> No, I am not dwelling in the past, I am in the year 2002.
>
> Bill W0IYH
>

I overlooked one of the most important things.
Intermodulation products generated in one sideband
also appear in the opposite sideband. Suppose
in USB two test tones are 400 Hz and 900 Hz. One
of the third-order IMD products is at
(1)*(400)-(2)*(900)=-1400
which is in the LSB.

High quality amateur PA's have third order IMD in
the 40 dB-below-PEP range.

This problem involves only the PA and occurs for
any method of SSB generation.

Bill W0IYH

395. Re: Antenna Matching Advice Needed (Homebrew Mobile Tuner)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 17:38:36 UTC
From: pete owen <nutmeg@w-link.net>
Message-ID: <3C43179C.E5136EA1@w-link.net>
Source record: 47386
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Have a look at Arnie Coro's great page. You'll find it at:

http://www.radiohc.org/dxers/

He's got lots of ideas for home brew stuff.

Good Luck,

Pete

396. Re: Antenna Matching Advice Needed (Homebrew Mobile Tuner)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 18:00:51 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a1v6kh$tdgk5$1@ID-124126.news.dfncis.de>
Source record: 47387
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

John,

All you may need is a base loading coil for the 12 meter band which should
give you a good enough match to 50 ohm coax.

Download program BOTLOAD from website below in a few seconds.

Program will tell you coil inductance, number of turns of what wire
diameter, to wind on your choice of size and shape of coil former.

If you want an even better match, download program ENDFEED which will tell
you values of coil and capacitor for an L-match. Or a T-match.

To design coils for a given inductance download program SOLNOID2.

****
Regards, Reg G4FGQ
Free Radio Modelling Programs
Http://www.g4fgq.com
****

--
****
Regards, Reg G4FGQ
Free Radio Modelling Programs
Http://www.g4fgq.com
****
John Wallace <littlejohn42@mailcity.com> wrote in message
news:97169496.0201140646.10bab690@posting.google.com...
> In my mobile I am currently running a 102" whip antenna on 10m which works
fine.
> However, I would like to be able to use it on 12m as well. What I would
like to
> do is to homebrew a fixed L/C tuner (pre-tuned for the middle of the 12m
band)
> that I can just switch in when I want to work 12m, and out when I want to
work
> 10m with no knobs to fiddle with. It also needs to handle around 400
watts. I
> would like to wind my own inductor etc. for it so I would need the coil
> dimensions, value of C, a schematic to see how this would all go together
would
> also be extremely helpful (this is my first project of this sort). Any
> assistance anyone can offer is greatly appreciated.
>

> 73.
> JW

397. Re: 160 meter antenna, need suggestions, limited space

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 18:25:34 UTC
From: w4pqwhs@aol.com
Message-ID: <20020114132534.24022.00001192@mb-cn.aol.com>
Source record: 47389

>
> I have limited space for this 160 meter project. Also, I am interested
>in an antenna for local ground wave coverage as opposed to sky wave dx
>use. Is there such a thing as a 160mtr 'mobile vertical' such as the
>ham stick type antennas

Since you mentioned using an old marine radio (2 to 3 mhz) on 160 you might consider using a marine antenna also, there are lots of them out there ,at a reasonable cost,I`m sure..they come in sizes from about 12' to 25' length .You will need a good earth ground, ground rod,fence ,counterpoise,wires on the ground or under the ground...won`t work without GOOD ground..If you use marine 2/3 mhz antenna,just add about a foot to the top whip and check for resonance,you can make it resonance by adjusting length of top whip..good luck Harold W4PQW

398. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 18:48:58 UTC
From: "William E. Sabin" <sabinw@mwci.net>
Message-ID: <3C43281A.5070009@mwci.net>
Source record: 47390
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

William E. Sabin wrote:

> William E. Sabin wrote:
>
>> Gary Coffman wrote:
>>
>>
>>> As you say, *all* of these spurious products are integrated by the
>>> receiver. Reducing any one of them improves matters. In other words,
>>> you can't output
>>> a cleaner signal than is input, so you want to start with the
>>> cleanest practical
>>> input. Attacking every source of spurious after the modulator can
>>> improve matters even more.
>>
>>
>>
>>
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>> environment, economics and the cost-of-ownership (already quite high
>> for many, which is probably why QRP and boatanchors are so popular) do
>> not lead to extremely low levels of out-of-band emissions from the
>> transmitter (due to all causes) or extremely low levels of
>> susceptibility (due to all causes) in the receiver.
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>> Frequencies outside that range can, and should be, attenuated very
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>> except for flea power systems) far removed from the antenna, and that
>> provides a lot of opportunities for degradation of the signal,
>> transmit or receive. I am familiar with the sales pitch for DSP, and
>> that is OK, but like so many things it has been hyped beyond its

>> *real* value.
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>> As a practical matter, filter rigs that use high quality filters (xmit
>> and rcv) provide out-of-band quality that is more than adequate,
>> considering the *entire* picture. It isn't true that there is only
>> "one way to go" and all other ways are "just plain dumb".
>>
>> No, I am not dwelling in the past, I am in the year 2002.
>>
>> Bill W0IYH
>>
>
>
> I overlooked one of the most important things. Intermodulation products
> generated in one sideband also appear in the opposite sideband.
> Suppose in USB two test tones are 400 Hz and 900 Hz. One of the
> third-order IMD products is at (1)*(400)-(2)*(900)=-1400
> which is in the LSB.
>
> High quality amateur PA's have third order IMD in the 40 dB-below-PEP
> range.
>
> This problem involves only the PA and occurs for any method of SSB
> generation.
>
> Bill W0IYH
>

A correction (darn it). The third order products
are at -100 Hz (LSB) and 1400 (USB) Hz. The fifth
order products are at -600 (LSB) and 1900 (USB).

Bill W0IYH

Bill W0IYH

399. Re: Does FM Skip????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 18:58:23 UTC
From: Frank Worm <fworm@norpak.ca>
Message-ID: <3C432ABD.2C172493@norpak.ca>
Source record: 47391

This reason for this question is:
I was having a debate with a geophysicist one day.
He basically convinced me that FM although it does skip using the right freq. It tends to scatter as the carrier frequency is deviated therefore a
radio would not be able to decode the message from a skipped signal.
Only AM,CW or SSB is receivable from the skipped signal
Is this true? He did seem to make sense.

Frank Worm wrote:

> Hello All
> If a chicken band transceiver modulates FM will it skip
> and still be able to decode the message??
> Thank in advance
> Regards

400. Re: Overtone Crystal Filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 19:14:29 UTC
From: ritter@ciphersbyNOSPAMritter.com
Message-ID: <3c432d12.560831@netnews.att.net>
Source record: 47392

On Mon, 14 Jan 2002 10:49:02 +0000, in
<ujKhMyFeerQ8Ew$o@hobbit.demon.co.uk>, in rec.radio.amateur.homebrew
Martin Farrell <Martin@hobbit.demon.co.uk> wrote:

>>Is there anybody that has a pointer to a good reference or report on
>>overtone crystal filters?
>
>Jim, there was an article by G�rard Lagier F6EHJ in the French Megahertz
>magazine (number 223 October 2001) on a practical approach to the design
>and methodology of producing 36MHz ladder filters. He has developed some
>'rules on thumb' for producing Chebyshev and Cohn configurations of SSB
>and CW filters.
>
>F6EHJ@wandoo.fr
>http://www.megahertz-magazine.com

That sure did not come up for me.

If the article is not on line, how about summarizing the content for
us, with essential quotes and 'rules of thumb'? Thanks.

Terry KF5MH

401. Re: Antenna Matching Advice Needed (Homebrew Mobile Tuner)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 19:20:53 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3C432F83.7DFE61DE@shaw.ca>
Source record: 47393
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

John Wallace wrote:
>
> In my mobile I am currently running a 102" whip antenna on 10m which works fine.
> However, I would like to be able to use it on 12m as well. What I would like to
> do is to homebrew a fixed L/C tuner (pre-tuned for the middle of the 12m band)
> that I can just switch in when I want to work 12m, and out when I want to work
> 10m with no knobs to fiddle with. It also needs to handle around 400 watts. I
> would like to wind my own inductor etc. for it so I would need the coil
> dimensions, value of C, a schematic to see how this would all go together would
> also be extremely helpful (this is my first project of this sort). Any
> assistance anyone can offer is greatly appreciated.
>
> 73.
> JW

Jusy clip a 'stinger' -- a couple feet of stiff wire onto
the end of the
hustler whip and trim it down to resonance.
--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my website at http://members.home.net/finkirv/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

402. Re: Does FM Skip????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 19:26:51 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <u46c7hk6tpuna2@corp.supernews.com>
Source record: 47394

RTTY uses two frequencies and people work skip using it all the time. MFSK16 uses 16 frequencies and people work skip using it on a regular basis. SSTV uses many frequencies just like FM and people work skip with it. I doubt there would be a problem decoding a skip FM signal unless the deviation were much wider than the +/- 5Khz normally used.

403. Re: Replace XTAL Filter Help pse

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 19:37:59 UTC
From: Yrrah <harke.smits@hccnet.nl>
Message-ID: <a1vbuq$h2d$1@news.hccnet.nl>
Source record: 47395

Mike,

Try and find the datasheet of the SL612. The KVG filter is about 560 ohms, sometimes a trimmer from either side to ground is advised to improve passband ripple. (if you can sweep it)
Transform the mixers output impedance to 560 ohms e.g. with tapped and tuned inductor.
The 612's input impedance at 9 MHz is about 1650 ohms. Leave the input cap and add a 50 ohms res. in series for stability. Then a 820 ohms resistor to ground. Connect filter output at the resistor node.
Good luck,
Harke
The old Plessey book was never thrown away, you know.

Mike W <mike@corn2.freeserve.co.uk> schreef in berichtnieuws 3c42f9d8.26421682@news.freeserve.net...
> I'm wishing to replace an existing discrete xtal filter with a KVG9
> SSB filter.
> the existing filter circuit is shown in the drawing at
>
> www.corn2.freeserve.co.uk\filter.gif
>
> can I just remove everything between the 0.01 caps and fit the KVG
> filter between them, or should I add matching as well?, if so what
> would you reccomend ?.
> your comments appreciated.
> Thanks Mike W, G8NXD

404. Re: Calibrate A capacitor Standard

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 20:05:30 UTC
From: k7itm@aol.com
Message-ID: <3200347.0201141205.2da4d7f@posting.google.com>
Source record: 47396

What value? How accurately? What standards (and/or sufficiently well
calibrated measurements) do you have access to?

Cheers,
Tom

"Clyde R. Shappee" <cshappee@ieee.org> wrote in message
news:<3C422100.6DA71A52@ieee.org>...
> Can anyone here either recommend an easy way to calibrate a standard
> capacitor,
>
> Or is there a reader in the Boston Metro area that has access to a
> DigiBridge or suitable equipment?
>
> Clyde
>
> KA1CRV

405. Re: Does FM Skip????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 20:14:46 UTC
From: SAM <xxscottm@xxnetcommander.comxx>
Message-ID: <W_G08.491685$C8.35388205@bin4.nnrp.aus1.giganews.com>
Source record: 47247

> He basically convinced me that FM although it does skip using the right freq. It tends to scatter as the carrier frequency is deviated therefore a radio would not be able to decode the message from a skipped signal.

He's wrong. You can operate 10 meters FM when the band is open and talk great distances. You do tend to get an exaggeration if you will of the signal fade due to the cliff effect of FM, and you will get some selective fading that will sometimes make the signal unintelligible, but FM skip is certainly possible.

406. Re: Stroboscope for CW RX tuning

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 20:29:01 UTC
From: la8ak.xnd@online.no
Message-ID: <3c433d42.11390758@news.online.no>
Source record: 47248

I've probably used the wrong word. The instrument must show all the
signals in the passband, therefore I thought about the tune reed
frequency meter, but not sure if it is possible to find such solution

73,
Jan_Martin
N4623-Kristiansand
LA8AK
----- Original Message -----
From: "Alan Melia" <Alan.Melia@btinternet.com>

> Hi Jan-Martin, this instrunment is a tune reed frequency meter. They are
> usually manufactured for particular centre frequencies. They are most often
> seen on small petrol 240v AC generator-sets. I dont think you could modify
> this for 800Hz as you would need to re-tune the mechanical resonance of the
> indicating reeds. I think a resonance at 800Hz would call for a very short
> reed.
> Maybe you need something like to ToniTuner?? I am sure as an RTTY man you
> have come across that.
>

> Cheers de Alan G3NYK

--
remove ,xnd to reply

407. FS: Group of 4 Old Radio Books, All for $9

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 20:31:17 UTC
From: oldbooks78@aol.com
Message-ID: <20020114153117.11359.00002333@mb-cg.aol.com>
Source record: 47249

I currently have the following 4 radio-related books for sale, available as a group for $9 plus $4.50 postage (media Mail within the US, at cost elsewhere). The books are:

U.S. Naval Training Schools "Basic Radio Notes & Communication Circuits" published in Chicago: Original Wraps. No Jacket. The 147 page softbound book is in good+ condition, clean with no page tears or pen marks other than a previous owners name inside the front cover, and again on the page ends. The covers are a little chipped along the spine, but everything holdong together nicely. Not dated, but looks to be c1950.

Hornung, J.L. "Radio Operating Questions and Answers, 10th Edition" published by McGraw-Hill, 1950. No Jacket. The 588 page hardbound book is in very good condition, clean with no page tears or pen marks, and a strong binding. Blue cloth covers show a bit of wear, but the cloth is not torn, and everything is tight and secure.

Miller, Wayne "Radio Operators' License Manual 1944" published by Ziff-Davis Publishing, 1944 Cloth. No Jacket. The 229 page hardbound book is in very good condition, clean with no page tears or pen marks except for a previous owners name inside the front cover, and a note inside the rear cover. A nice early study guide for obtaining a radio operators license.

Brainerd, Koehler, Reich and Woodruff "Ultra-High-Frequency Techniques" published by Van Nostrand Co. 1942 Good/No Jacket. A WWII era text book on UHF techniques developed by representatives from 40 academic institutions specifically to help prepare engineers in areas needed in support of the war effort. The 570 page hardbound book is only in good condition. An ex-library discard from the Naval Air Systems Command Technical Library Division. A significant amount of wear to the blue cloth covers.

If interested in the 4 books, please email to "Oldbooks78@aol.com" to reserve. Thanks.

Dave

408. Re: Does FM Skip????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 20:42:37 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <3C4342BD.7356CE93@dialpoint.net>
Source record: 47250

Now that you have put the question in something I can understand I can
give you a beter answer.

While many things hapen to a signal as it goes through the ionosphere
and other methods of propogation, most the time the signal can be
received without any problem. I have worked many stations on the ham
bands around 29 mhz and also around 53 mhz and a few around 146 mhz that
were using FM. Most of the time they sounded the same as stations that
are just a few miles away.

While many times if you look at the pure theory of how things work, it
does not always do that is practice. It could be true (I don' know)
that what he is saying is partly true but it does not effect a signal
enough to be noticed during normal talking. It is just like there is
some distortion in every device an audio signal goes through. There is
just not enough distortion produced to make much differance. To a very
well trained ear it can be detected, but the general public will not
notice it. Sort of like adding a single brick to a truck load. It is
there but not noticable except under very rare conditions.

Frank Worm wrote:
>
> This reason for this question is:
> I was having a debate with a geophysicist one day.
> He basically convinced me that FM although it does skip using the right
> freq. It tends to scatter as the carrier frequency is deviated therefore
> a
> radio would not be able to decode the message from a skipped signal.
> Only AM,CW or SSB is receivable from the skipped signal
> Is this true? He did seem to make sense.
>
> Frank Worm wrote:
>
> > Hello All
> > If a chicken band transceiver modulates FM will it skip
> > and still be able to decode the message??
> > Thank in advance
> > Regards

409. Re: Does FM Skip????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 20:49:33 UTC
From: troglodite@aol.com
Message-ID: <20020114154933.08095.00002371@mb-fi.aol.com>
Source record: 47251

>While many times if you look at the pure theory of how things work, it
>does not always do that is practice.

Quite true. We all know how an airfoil works - top is curved, bottom is flat so air flows slower over the top than the bottom resulting in the formation of a partial vacuum which produces lift. OK, how does a plane fly upside down?

410. Re: Overtone Crystal Filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 21:02:43 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u46hrjt9tgcvf8@corp.supernews.com>
Source record: 47252

My French is absolutely terrible, especially my technical French. Is there a translation somewhere? On line? Or could you sum it up and give us the guts of it or a place to start?

Jim

"Martin Farrell" <Martin@hobbit.demon.co.uk> wrote in message news:ujKhMyFeerQ8Ew$o@hobbit.demon.co.uk...
>
> Jim, there was an article by G�rard Lagier F6EHJ in the French Megahertz
> magazine (number 223 October 2001)

411. Re: Does FM Skip????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 21:06:48 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u46i38eqmvjp51@corp.supernews.com>
Source record: 47253

"Troglodite" <troglodite@aol.com> wrote in message
news:20020114154933.08095.00002371@mb-fi.aol.com...
>
> >While many times if you look at the pure theory of how things work, it
> >does not always do that is practice.
>
> Quite true. We all know how an airfoil works - top is curved, bottom is
flat so
> air flows slower over the top than the bottom resulting in the formation
of a
> partial vacuum which produces lift. OK, how does a plane fly upside down?
>

Very well, thank you.

Actually, the angle of attack on a symmetric airfoil (and no, they are NOT curved and flat) is the same no matter which way the pilot's head is oriented. Upside down is a relative term; the airplane has not a clue other than the fact that the oil and fuel need some planning and forethought.

Jim

412. Airfoils

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 21:21:33 UTC
From: troglodite@aol.com
Message-ID: <20020114162133.23483.00002380@mb-md.aol.com>
Source record: 47254

>
>Very well, thank you.

Well of course, and we all know that too.

>Actually, the angle of attack on a symmetric airfoil (and no, they are NOT
>curved and flat) is the same no matter which way the pilot's head is
>oriented. Upside down is a relative term; the airplane has not a clue other
>than the fact that the oil and fuel need some planning and forethought.

The simple airfoils such as used on beginner model planes are flat on the bottom, but it really doesn't matter as you have pointed out. Fact is, a lot of people will accept the simple explanation, then are puzzled by the inverted question. Here's another for you:

What's the difference between the letters in the top row and the bottom row?

AEFHIKLMNTVWXYZ
BCDGJOPQRSU

73,

Doug Moore

P.S. Apologies for off topic message.

413. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 21:35:09 UTC
From: "Harold E. Johnson" <W4ZCB@Home.com>
Message-ID: <hal08.51531$LQ1.15681612@news2.nash1.tn.home.com>
Source record: 47255

OK Jack, I received your crystals and measured them. I certainly should have revisited my Quattro spread sheet before I made my smart remark about low ESR of your crystals. Been working too long on 5 MHz crystals I think.

At any rate, nothing wrong with your measurements, just that the frequency was outside my recent experience.

Crystal fh fl fo df rt rp q
A 13500057 13499748 13499903 309 4.691 3.71 98930.278
B 13500002 13499653 13499828 349 4.691 4.55 78561.608
C 13500109 13499805 13499957 304 4.691 3.7 100709.58
D 13500062 13499735 13499899 327 4.691 4.21 87284.968
E 13500176 13499862 13500019 314 4.691 3.91 94575.125

Those crystals ought to make fine filters. I see the same spurs you described, about 75 KHz above the desired. There's another one as well, at about 125 KHz above the desired. They're not going to make a decent 2 pole because of these, but if you go to 4 or 6 or 8 pole, they ought to yield a filter with under 5 dB IL at your 1 KHz bandwidth and well under 2.5 at SSB bandwidths. There's a nice spread between the resonant frequencies, I had a thousand 9 MHz crystals from Bowmar that were all within a few Hz of each other. If you characterize them, and do a ladder with Haywards X and L software, I'm sure you could hit the required frequencies just by crystal selection without pulling them to the mesh frequency.

Sorry I questioned your measurements, but happy to provide a sanity check, will return the rocks in the next couple of days.

W4ZCB

414. Loopsticks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 21:46:04 UTC
From: william.g.jones@btopenworld.com
Message-ID: <3c435135.1907919@news.btinternet.com>
Source record: 47256

q

415. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 21:48:15 UTC
From: "Harold E. Johnson" <W4ZCB@Home.com>
Message-ID: <zmI08.51546$LQ1.15687312@news2.nash1.tn.home.com>
Source record: 47257
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

> > High quality amateur PA's have third order IMD in the 40 dB-below-PEP
> > range.
> >
> > This problem involves only the PA and occurs for any method of SSB
> > generation.

Indeed it does. And unfortunately, the range for Low quality amateur PA's, the likes of which you've seen reviewed recently, run more to appreciably under 30 dBc ..

W4ZCB

416. Re: Airfoils

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 21:48:15 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u46kh3gji4tbca@corp.supernews.com>
Source record: 47258

Fact is, a lot of
> people will accept the simple explanation, then are puzzled by the
inverted
> question.

Not after you've been a flight instructor for thirty years.

Here's another for you:
>
> What's the difference between the letters in the top row and the bottom
row?
>
> AEFHIKLMNTVWXYZ
> BCDGJOPQRSU

They are different letters.

Jim

417. Re: With just a DVM and Inductance meter...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 22:23:11 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C435A4F.25D594@clifto.com>
Source record: 47259

Kenneth D. Grimm, K4XL wrote:
> As a matter of curiosity, does anyone know the color code used on the
> slugs of IF transformers? Is there a standard, or as implied above,
> is there no rhyme or reason?

I've wondered that myself.

--
Remember, "close" counts in horse-shoes, hand-grenades and nuclear warfare,
but in spamming, it's considered unnecessary precision. -- Alun Jones

418. Re: AM Antenna (Justice or Super Select-A-Tenna)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 22:28:03 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C435B73.1B9B5A21@clifto.com>
Source record: 47260

Steve Fleckenstein wrote:
> If select-a-tenna is just a loop with a tuner why couldn't I just roll my
> own from the junk box under the work bench ?

Good question. Many in rec.radio.shortwave say they get better results from
the Select-A-Tenna than, say, the Radio Shack loop. It'd be interesting
if someone took them apart and reported on the differences in design.

You *can* roll your own; there are plans all over the 'net. Just do a web
search.

--
Remember, "close" counts in horse-shoes, hand-grenades and nuclear warfare,
but in spamming, it's considered unnecessary precision. -- Alun Jones

419. Re: Calibrate A capacitor Standard

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 22:36:14 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C435D5E.BC86A134@ieee.org>
Source record: 47261

I have:

3-1/2 digit dvm (4000 count)
AC VTVM +/- 2%, mirrored scale, up to 2 MHz frequency
precision oscillator 10Hz to 10MHz
frequency counter
wirewound decade resistors 1 ohm step
various resistor standards 50 ohm to 10k good to 0.05%, several 10k, several 1k. I believe them
to be ok.
time

The capacitor standard is marked 0.01 uF +/- 0.25 percent.

I'd like to know if it is within 0.5 percent, or measure with what I have as best I can. I don't think with my DVM I can do any better than that.

The DVM measures capacitance, and measures this standard at 0.012 uF and I have never trusted
it. This is 20 percent off!

When I put the capacitor standard in my bridge, which is good to 1% it lands on 0.01 uF on the
nose. It is an old bridge, but I have no reason to not believe it.

I have tried putting a 10 k resistor in series, and adjust an applied frequency until the voltage drop across the resistor = voltage drop across the capacitor. I used 4.000 V total. Then calculate the based on frequency what the capacitor is, believing the reactance of the capacitor is equal to the resistance.

I get a value that is even worse than the DVM if I remember correctly. I will have to redo the
test.

Clyde

Tom Bruhns wrote:

> What value? How accurately? What standards (and/or sufficiently well
> calibrated measurements) do you have access to?
>
> Cheers,
> Tom
>
> "Clyde R. Shappee" <cshappee@ieee.org> wrote in message
news:<3C422100.6DA71A52@ieee.org>...
> > Can anyone here either recommend an easy way to calibrate a standard

> > capacitor,
> >
> > Or is there a reader in the Boston Metro area that has access to a
> > DigiBridge or suitable equipment?
> >
> > Clyde
> >
> > KA1CRV

420. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-14 22:45:54 UTC
From: Gary Schafer <gschafer@mediaone.net>
Message-ID: <3C435F02.F93E5864@mediaone.net>
Source record: 47262
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

"Harold E. Johnson" wrote:

> > > High quality amateur PA's have third order IMD in the 40 dB-below-PEP
> > > range.
> > >
> > > This problem involves only the PA and occurs for any method of SSB
> > > generation.
>
> Indeed it does. And unfortunately, the range for Low quality amateur PA's,
> the likes of which you've seen reviewed recently, run more to appreciably
> under 30 dBc ..
>
> W4ZCB

Some of the transceiver outputs are not too much better.

73
Gary K4FMX

421. Re: Does FM Skip????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 00:18:04 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <u46t9jk6vdh26c@corp.supernews.com>
Source record: 47263

> While many times if you look at the pure theory of how things work,
it
> does not always do that is practice.

Any time practice doesn't follow the theory then the theory is wrong
because we don't completely understand the physics involved. There
have been plenty of theory proved wrong over the years.

422. Re: Does FM Skip????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 00:43:38 UTC
From: mikea@mikea.ath.cx
Message-ID: <_WK08.3260$EI6.536367272@newssvr16.news.prodigy.com>
Source record: 47264

"Bob Lewis \(AA4PB\)" <rlewis@staffnet.com> wrote:
:> While many times if you look at the pure theory of how things work,
: it
:> does not always do that is practice.

: Any time practice doesn't follow the theory then the theory is wrong
: because we don't completely understand the physics involved. There
: have been plenty of theory proved wrong over the years.

Exactly so. Someone in the 19th century "proved" that a bumblebee
couldn't fly. According to his model, that is. His model assumed
that the bumblebee's wings were stationary.

Others have since noted that a bumblebee _does_ fly, and that a
bumblebee's wings move.

--
I had NANAE and ASR mixed up - I thought NANAE was the place
where Useful Information is not allowed. I've not seen much of it
here lately. -- Steve Sobol, in NANAE

423. Re: DDS cleanup using PLL

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 00:57:20 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C437E2E.7CE8@pop.removethistomailme.net>
Source record: 47265
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Richard Hosking wrote:
>
>snip
> I was intending to use a Minicircuits VCO 45-75 MHz as the LO
> This project is presumably not for the faint hearted. Have any of you
> learned gentlemen had any experience of this?
>

By coincidence, I'm doing the exact same thing for a DC-daylight receiver LO, and with your AD9854 board, no less. :)

The PLL reference clock in my design is:

- AD9854 clocked at 100 MHz, output center frequency 10.7 MHz
- 180 kHz ceramic FM IF filter bracketed by MCL T6-1 matching xfrmrs
- MAR-6 MMIC amp to get the level back up to 0 dBm
- MCL PLP-10.7 low-pass filter to clean up high-order overtones passed by the ceramic filter

The phase detector will be an Analog Devices ADF4112 (ordered via Analog's direct-sales web site but not received yet). This is essentially a copy of the NatSemi PLLatinum chip with a programmable prescaler and more charge-pump gain.

My VCO is a Mini-Circuits ROS-2150VW, driven from the 5V phase detector chip with a third-order loop filter based on an OP27 low-noise opamp. The ROS-2150VW is a nice part -- it's about US $30, and gives a full octave of coverage between 1.0 and 2.0 GHz. Phase noise is -96 dBc at 10 kHz, which is actually pretty respectable for a beast of this nature.

Using a DDS with a narrow BPF as a PLL reference is absolutely the way to go, IMHO. The fixed BPF essentially acts like a very high-Q tracking filter. It allows the DDS to do what it's good at -- provide stable signals with a high degree of frequency precision -- while avoiding the sea of spectral garbage you usually get when you use a DDS as a PLL reference external to the loop.

My current plan is to run the ADF4112's R counter at 3X, yielding a comparison frequency (Fcomp) of around 3.57 MHz. The synthesizer is required to cover the 1-2 GHz octave in full, so the N modulus will range from 280 to 560. The DDS tuning range will be about 38 kHz (Fcomp / Nmin * R).

So far, I've tested the general idea with a Qualcomm Q2334 DDS driving a NatSemi LMX2326 PLLatinum chip through a 25 kHz-wide 11.5 MHz crystal filter (N=1043 at 1 GHz, R=12). The results have been really, really

promising. With a narrow loop BW (1.5 kHz-3 kHz in most of my tests to date), the output at the Mini-Circuits VCO is the expected -96 dBc at 10 Khz, which is already good enough for the adjacent-channel rejection I'm after. And there's not a spur in sight. I looked at about 100 randomly-chosen frequencies between 1 and 2 GHz, and the output spectrum remained essentially identical at each of them.

The 1 GHz plot is at http://209.95.122.40/jm/TRACE.GIF -- the outer plot is the LMX2326-based synthesizer, and the inner plot is from an HP8662A to mark the analyzer's own phase-noise floor.

The LMX2326's prescaler is hardwired to 32X, so its minimum N modulus is 992. With the Analog part, I'll be able to reduce Nmin to 280 for almost 11 dB less noise. I'm thinking I can afford to widen the loop BW quite a bit with the new chip, and if so, I'm pretty sure it will be possible to get the performance of the final design close to my analyzer's own limits. I'm already within 6-7 dB of matching the performance of the synthesizer in my Icom R7000, which is a very complex multiloop dual-VCO beast.

This is more than you wanted to know, probably, but if it helps you decide to use the narrowband-DDS-as-reference topology, it might be worth it. I've been really impressed with the simplicity, economy, and flexibility of this approach. It's hard to imagine doing it any other way... there just doesn't seem to be a downside.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

424. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 01:44:33 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <lh174ugvb6tb1bmrdo0uoga5pop572844t@4ax.com>
Source record: 47267

Harold:

thanks--its always good to have a second view on things and this is my first attempt at a crystal filter. Please add the crystals to your junkbox--no need to return them. They probably cost me around 10 cents each.

Just as you say, these crystals show three resonances; the desired 13.500 KHz, and two above it. In the 2 crystal filter that I built, however, I only saw a response due to the ones at +75 KHz. Apparently the ones around +125 KHz didn't align, but that was hapenstance, not design.

I don't know if you saw it or not, but I did post some Rs measurements versus drive. At the lowest drive levels, around -50 dBm, Rs increased to over 40 ohms. It was in the 4 - 5 ohm range over a fairly wide range, and then started to climb again at +10 dBm or more. In a typical filter, signal levels would usually be well below -50 dBm, so designing with a higher Rs would make some sense. I assume your measurements must have been made with drive somewhere between -30 dBm and +10 dBm.

Thanks again for the measurements.

Jack K8ZOA

On Mon, 14 Jan 2002 21:35:09 GMT, "Harold E. Johnson" <W4ZCB@Home.com> wrote:

>OK Jack, I received your crystals and measured them. I certainly should have
>revisited my Quattro spread sheet before I made my smart remark about low
>ESR of your crystals. Been working too long on 5 MHz crystals I think.
>
>At any rate, nothing wrong with your measurements, just that the frequency
>was outside my recent experience.
>
>Crystal fh fl fo df rt rp q
>A 13500057 13499748 13499903 309 4.691 3.71 98930.278
>B 13500002 13499653 13499828 349 4.691 4.55 78561.608
>C 13500109 13499805 13499957 304 4.691 3.7 100709.58
>D 13500062 13499735 13499899 327 4.691 4.21 87284.968
>E 13500176 13499862 13500019 314 4.691 3.91 94575.125
>
>Those crystals ought to make fine filters. I see the same spurs you
>described, about 75 KHz above the desired. There's another one as well, at
>about 125 KHz above the desired. They're not going to make a decent 2 pole

>because of these, but if you go to 4 or 6 or 8 pole, they ought to yield a
>filter with under 5 dB IL at your 1 KHz bandwidth and well under 2.5 at SSB
>bandwidths. There's a nice spread between the resonant frequencies, I had a
>thousand 9 MHz crystals from Bowmar that were all within a few Hz of each
>other. If you characterize them, and do a ladder with Haywards X and L
>software, I'm sure you could hit the required frequencies just by crystal
>selection without pulling them to the mesh frequency.
>
>Sorry I questioned your measurements, but happy to provide a sanity check,
>will return the rocks in the next couple of days.
>
>W4ZCB
>

425. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 02:44:00 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <2r574uc6eg1a3ulevine1gojviqq8ttlhd@4ax.com>
Source record: 47268

I was poking around the internet and found an interesting 292-page
crystal tutorial at:

http://www.corningfrequency.com/catalog/vig/vig-tutorial.pdf

In particular, page 3-6 has a graphic that shows spurious crystal
frequencies coupled with X-ray topographs showing the actual resonance
modes for some of the major spurs.

Perhaps more than anyone wants to know, but quite interesting.

Jack K8ZOA

On Mon, 14 Jan 2002 21:35:09 GMT, "Harold E. Johnson" <W4ZCB@Home.com>
wrote:

>OK Jack, I received your crystals and measured them. I certainly should have
>revisited my Quattro spread sheet before I made my smart remark about low
>ESR of your crystals. Been working too long on 5 MHz crystals I think.
>
>At any rate, nothing wrong with your measurements, just that the frequency
>was outside my recent experience.
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>Crystal fh fl fo df rt rp q
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>E 13500176 13499862 13500019 314 4.691 3.91 94575.125
>
>Those crystals ought to make fine filters. I see the same spurs you
>described, about 75 KHz above the desired. There's another one as well, at
>about 125 KHz above the desired. They're not going to make a decent 2 pole
>because of these, but if you go to 4 or 6 or 8 pole, they ought to yield a
>filter with under 5 dB IL at your 1 KHz bandwidth and well under 2.5 at SSB
>bandwidths. There's a nice spread between the resonant frequencies, I had a
>thousand 9 MHz crystals from Bowmar that were all within a few Hz of each
>other. If you characterize them, and do a ladder with Haywards X and L
>software, I'm sure you could hit the required frequencies just by crystal
>selection without pulling them to the mesh frequency.
>
>Sorry I questioned your measurements, but happy to provide a sanity check,
>will return the rocks in the next couple of days.
>
>W4ZCB
>

426. Re: Does FM Skip????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 02:48:48 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C439890.2FF0BB53@eznec.com>
Source record: 47266

Strictly as Bob said it, I agree completely. That is, if theory doesn't agree with how something actually works, the theory is wrong, incomplete, or otherwise inadequate. But we do have to be careful to distinguish between how something actually works and how it appears to work. I remember from my technician days that careless measurements would often seemingly refute Ohm's or Kirchoff's laws, and that a surprising number of technicians were ready to abandon these laws on the basis of the bum measurements. Likewise, there are a bunch of imaginative antenna marketeers out there who measure impossible gains in their back yards, and invent new antenna theory to explain it. (I publicly offered to one of them to pay the cost of a professionally done test at a certified site if the test showed that the antenna met the claims he was making for it. Do you suppose he accepted?)

Although plenty of theory has been proved wrong over the years, it's not every day that principles which have stood for a hundred years are overturned. And it's even more rare for them to be overturned (these days) by back yard tinkerers. So when established theory doesn't match the measurements, first make sure you're applying the theory correctly. Then be damned certain of your measurements before you even think about abandoning the theory. Then if you're really certain that your measurements are good and they refute established theory, dust off the word processor, write a paper, and get ready for fame and recognition.

It's a whole lot easier to tell that a bumblebee can fly than it is to tell what the gain of an antenna is.

Roy Lewallen, W7EL

Mike Andrews wrote:
>
> "Bob Lewis \(AA4PB\)" <rlewis@staffnet.com> wrote:
> :> While many times if you look at the pure theory of how things work,
> : it
> :> does not always do that is practice.
>
> : Any time practice doesn't follow the theory then the theory is wrong
> : because we don't completely understand the physics involved. There
> : have been plenty of theory proved wrong over the years.
>
> Exactly so. Someone in the 19th century "proved" that a bumblebee
> couldn't fly. According to his model, that is. His model assumed
> that the bumblebee's wings were stationary.
>
> Others have since noted that a bumblebee _does_ fly, and that a

> bumblebee's wings move.
>
> --
> I had NANAE and ASR mixed up - I thought NANAE was the place
> where Useful Information is not allowed. I've not seen much of it
> here lately. -- Steve Sobol, in NANAE

427. Re: Calibrate A capacitor Standard

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 03:54:36 UTC
From: k7itm@aol.com
Message-ID: <3200347.0201141954.258c26e0@posting.google.com>
Source record: 47269

Hi Clyde,

(Also answered in email in a bit more detail...)

Given what you have to work with, I'd be very inclined to use the cap
in a frequency-selective bridge circuit, such as a Wien bridge or a
twin-T notch filter. For the Wien bridge, for example, you'd use your
existing bridge to make a second capacitor with "exactly" the same
capacitance as your standard; then use some of your 10k, 0.05%
resistors to complete the bridge (assuming they are low
inductance...or calibrate some small metal-film R's), and measure the
null frequency. Lessee...10kohms and 0.01uF should get you about
1591.5Hz, which should be measurable to within the resistor accuracy
given what you have to work with.

A twin-T lets you have both source and detector share a common ground,
but takes three caps (one twice the capacitance of the other two is
convenient).

Or...get someone to measure it for you. :-)

Cheers,
Tom

"Clyde R. Shappee" <cshappee@ieee.org> wrote in message
news:<3C435D5E.BC86A134@ieee.org>...
> I have:
>
> 3-1/2 digit dvm (4000 count)
> AC VTVM +/- 2%, mirrored scale, up to 2 MHz frequency
> precision oscillator 10Hz to 10MHz
> frequency counter
> wirewound decade resistors 1 ohm step
> various resistor standards 50 ohm to 10k good to 0.05%, several 10k, several 1k. I
believe them
> to be ok.
> time
>
> The capacitor standard is marked 0.01 uF +/- 0.25 percent.
>
> I'd like to know if it is within 0.5 percent, or measure with what I have as best I can.
I
> don't think with my DVM I can do any better than that.
>
> The DVM measures capacitance, and measures this standard at 0.012 uF and I have never
trusted

> it. This is 20 percent off!
>
> When I put the capacitor standard in my bridge, which is good to 1% it lands on 0.01 uF on the
> nose. It is an old bridge, but I have no reason to not believe it.
>
> I have tried putting a 10 k resistor in series, and adjust an applied frequency until the
> voltage drop across the resistor = voltage drop across the capacitor. I used 4.000 V total.
> Then calculate the based on frequency what the capacitor is, believing the reactance of the
> capacitor is equal to the resistance.
>
> I get a value that is even worse than the DVM if I remember correctly. I will have to redo the
> test.
>
> Clyde
>
> Tom Bruhns wrote:
>
> > What value? How accurately? What standards (and/or sufficiently well
> > calibrated measurements) do you have access to?
> >
> > Cheers,
> > Tom
> >
> > "Clyde R. Shappee" <cshappee@ieee.org> wrote in message
news:<3C422100.6DA71A52@ieee.org>...
> > > Can anyone here either recommend an easy way to calibrate a standard
> > > capacitor,
> > >
> > > Or is there a reader in the Boston Metro area that has access to a
> > > DigiBridge or suitable equipment?
> > >
> > > Clyde
> > >
> > > KA1CRV

428. Re: Does FM Skip????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 04:04:47 UTC
From: Gary Glaenzer <nobulltrans@irtc.net>
Message-ID: <yTN08.48$R71.4915287@news2.randori.com>
Source record: 47270

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3C439890.2FF0BB53@eznec.com...
> Strictly as Bob said it, I agree completely. That is, if theory doesn't
> agree with how something actually works, the theory is wrong,
> incomplete, or otherwise inadequate. But we do have to be careful to
> distinguish between how something actually works and how it appears to
> work. I remember from my technician days that careless measurements
> would often seemingly refute Ohm's or Kirchoff's laws, and that a
> surprising number of technicians were ready to abandon these laws on the
> basis of the bum measurements. Likewise, there are a bunch of
> imaginative antenna marketeers out there who measure impossible gains in
> their back yards, and invent new antenna theory to explain it.

hey, I had a radio station engineer tell me once that if a two element VHF
dB Products antenna had a gain of 3 db, then a 4 element would have 12 dB
and an eight element would have a gain of 48 dB.............

man was he ever disappointed after he spent 1200 bucks on coax,
installation, iso-coupler (hot AM tower) and it didn't work as well as he'd
convinced managemnent that it should.................

429. FS; Beautiful LTV(usa) HAND-MIKE Matches Collins w/pics!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 04:44:17 UTC
From: rlucch2098@aol.com
Message-ID: <20020114234417.21159.00001357@mb-mt.aol.com>
Source record: 47271

Hi Guys;
I have one LTV/University Hand Mike Model 9000.
Its in Excellent shape with original box. Hi-Z & made in USA.
So its NOT a Real Collins but it does Really match the Collins gear :-)

http://www.baltimorepress.com/~wa2rqy/ltvmike1.jpg

http://www.baltimorepress.com/~wa2rqy/ltvmike2.jpg
$40ppd Priority shipped!

Thanks es 73..........RICH-WA2RQY RLUCCH2098@aol.com
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

430. FS: Many Items! NATIONAL, MILLER>>UPDATED, REDUXED!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 04:46:47 UTC
From: rlucch2098@aol.com
Message-ID: <20020114234647.21159.00001360@mb-mt.aol.com>
Source record: 47272

Hi Guys;
I got a bunch-o-stuff to sell.
I have added jpg pictures for your viewing pleasure :-)
1- NATIONAL Coil Sockets, NOS, $23.50ppd>>
http://www.baltimorepress.com/~wa2rqy/4nationalitems.jpg

2- NATIONAL MB-40 SL 80-10 meter TANK w/Swingin-Link, NOS, $80.00ppd>>
http://www.baltimorepress.com/~wa2rqy/nationaltank-1.jpg
http://www.baltimorepress.com/~wa2rqy/nationaltank-2.jpg

3-8 Miller coils, etc. NOS w/papers. $20.00ppd>>
http://www.baltimorepress.com/~wa2rqy/8millers1.jpg
http://www.baltimorepress.com/~wa2rqy/8millers2.jpg

4- 6 Miller coils, NOS, most have hardware & papers, $15.00ppd>>
http://www.baltimorepress.com/~wa2rqy/6millercoils.jpg

5- P & B relay & 2 AMPERITE delay tubes, NOS, $10.00ppd>>
http://www.baltimorepress.com/~wa2rqy/pbrelay-tubes.jpg

6- Five(5) ARRL Publications.
Learning Radio Telegraph Code, 13th ed., 1970, 48pgs
SSB for the Radio Amateur, 5th ed., 1970, 253pgs
SSB for the Radio Amateur, 2nd. ed., 1958, 210pgs.
Mobile Manual, 3rd ed., 1962, 270pgs.
VHF manual, 3rd ed., 1972, 252 pgs.
All books in excellent condition, many contruction articles & info.
Price is $20.00ppd>>
http://www.baltimorepress.com/~wa2rqy/5bookset1.jpg
http://www.baltimorepress.com/~wa2rqy/5bookset2.jpg

Thanks es 73..........RICH-WA2RQY RLUCCH2098@aol.com
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

431. Re: 160 meter antenna, need suggestions, limited space

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 07:34:31 UTC
From: ok1sip@atlas.cz
Message-ID: <8f3e93b5.0201142334.33673fa@posting.google.com>
Source record: 47273

Hi,
a DCTL antenna seems to be woth trying. I have done some measurements
on a 80 m version, the results were promising. I have not performed
on-air tests yet, as my TX is not QRV. A 160 m version is weel
possible. See
http://www.io.com/~n5fc/dctl_ant.htm and
http://marty.w.tripod.com/antennas.html
BR from Ivan

432. DDDS_NOVATECH BOARDS for DDDS tuner..anyone building..PARTS??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 08:44:53 UTC
From: ve3ab@mondenet.ca
Message-ID: <3c43eb13.443079@news.mondenet.com>
Source record: 47274

Hello. a little over a year ago...through this newsgroup..i purchased
some real nice DDDS boards with schematic..no parts however.
These are boards from NOVATECH and dated 1992. Did anyone
build one up yet?-Anyone have some of the ICs. I would like to start
building at least one of these up for the bench. NOTE: THE ICs are
getting old and perhaps no longer manufactured. 73 Earl VE3AB

433. Re: Antenna Matching Advice Needed (Homebrew Mobile Tuner)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 10:30:51 UTC
From: Bob Cook <captcook@compuserve.com>
Message-ID: <a210c9$o6e$1@suaar1aa.prod.compuserve.com>
Source record: 47275
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Reg, G4FGQ,

My compliments on your straight forward, multi-faceted, software based
suggestions here.
It helps us all.

Bob K9KKY

www.Ocean-Pro.com
Naples, Florida 34112
941-775-7435, 800-329-4884

434. Re: Overtone Crystal Filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 11:02:16 UTC
From: Martin Farrell <Martin@hobbit.demon.co.uk>
Message-ID: <goiSOwH4wAR8EwH$@hobbit.demon.co.uk>
Source record: 47276

>If the article is not on line, how about summarizing the content for
>us, with essential quotes and 'rules of thumb'? Thanks.
I was afraid of this ;-)

1. He takes a bag of nominal xtals and tests them in a tuned drain FET osc with the xtal from gate to ground. (BF245, 12turns T37-6 // 6/60pF and 100K gate resistor)
2. He then groups the xtals such that the spread of frequencies is less than 10% of the desired filter BW. e.g. 50Hz for CW and 270Hz for SSB.

3. For a Chebyshev filter @ 36MHz

```
IN -- C6 ---X1---X2---X3---X4---X5---C5---OUT
| | | |
C1 C2 C3 C4
| | | |
---------------------------GND--------------------------
```

For CW BP=500Hz Zi/o 50ohm
C1 and C6 = 70(68p) ;Calc(used)
C2 and C5 = 83(82p)
C3 and C4 = 110(100+10p)
Form factor 6:60dB = ~2.5 Loss=12dB

For SSB BP 2k7, Zi/o 1250ohm (15:3 turns on FT 37-43 torroid core to 50 ohm)
C1 and C6 = 3.3(2.7p)
C2 and C5 = 6.6(6.8p)
C3 and C4 = 8.6(8.2p)
Form factor 6:60dB = ~2.5 Loss=6dB

4. For a Cohn filter C1 to C4 are CW=10pF and SSB=82p (!This looks the wrong way round to me but it is as appears in the text!)
Replace matching C6 and C5 with a torroid for CW and nothing (short!) for SSB.

Rules of thumb (most of which are fairly obvious)
a) For a given frequency the bandwidth is greater for smaller C (increased coupling)
b) The shape factor will be better for a lower xtal frequency.
c) The greater the number of poles the better the shape factor but the attenuation will be higher.
d) The closer the frequency matching the better the attenuation and the out of band spurii will be lower.
For other frequencies:-
e) Build a Cohn filter starting with 100p for CW and 20p for SSB

f) Measure the passband (ignoring the ripple) and adjust the Cs
g) Stick a variable series R (500) in series with the I and O and vary
the resistance until the best ripple is obtained.
h) Tweek the Cs to get the desired passband and repeat f and g until
you're close enough.

I haven't done F6EHJ justice as it's a really practical article and
looses a lot in this precis. Legalities apart, I have not got a scanner!
--
Martin

435. Re: Antenna Matching Advice Needed (Homebrew Mobile Tuner)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 12:46:48 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a21imc$tr7lp$1@ID-124126.news.dfncis.de>
Source record: 47281
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Irv, why didn't *I* think of that ? Sometimes it's so easy to overlook the glaringly obvious.

Reg.

==========
> Jusy clip a 'stinger' -- a couple feet of stiff wire onto
> the end of the
> hustler whip and trim it down to resonance.

436. Ham Radio University 2002 for Long Island

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 13:23:21 UTC
From: GSBARC <info@gsbarc.org>
Message-ID: <d3W08.29014$Zh1.6337452@news02.optonline.net>
Source record: 47277
Cross-posted to: rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Ham Radio University 2002/ARRL New York City-Long Island Section Convention

Ham Radio University 2002 for Long Island

North Babylon, New York - On Sunday, January 20, 2002 at 8AM, the doors of the Babylon Town Hall Annex on Phelps Lane will open for the third annual Ham Radio University. Ham Radio University 2002 is a day of education about Amateur Radio.

This year the forums have been expanded and new forums have been added. There will be twenty, one-hour presentations with special forums geared to the non-ham as well as the experienced ham radio operator. The focus will be "hands on" with many demonstrations.

Come join us at the Babylon Town Hall Annex, Phelps Lane, North Babylon, Long Island, and learn about everything from satellite communications, low power operating using radios as small as a tuna tin, how to put up an emergency antenna, the latest information on advanced digital communications, finding and fixing radio frequency interference problems to purchasing your first station equipment or handi-talkie and a special "Ask the Experts" forum. There will also be a Special Event Station W2V set up and operational on HF. There will live SSTV pictures uploaded to the NLI WWW during the event.

HRU 2002 is sponsored by the Great South Bay ARC and is a cooperative effort between over twenty clubs and organizations in the New York City- Long Island area. It is also the American Radio Relay League, New York City-Long Island Section Convention. Besides the forums, there will be tables set up with information about the different groups, ham radio classes, exam session schedules, public service and other activities.

Join us for a day of fun and education for the whole family!
Admission is open to all - donation is $2 per person.
(complimentary refreshments available)

For more information contact:
Phil Lewis N2MUN, Chairman, n2mun@arrl.net or call 631-226-0698
George Tranos N2GA, ARRL NLI Section Manager, n2ga@arrl.org or call 631-286-7562

Additional information on the WWW at http://hudson.arrl.org/nli

437. Re: Antenna Matching Advice Needed (Homebrew Mobile Tuner)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 14:23:38 UTC
From: Dick Carroll <dickc58@worldnet.att.net>
Message-ID: <3C442F00.7223BF1C@worldnet.att.net>
Source record: 47278
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

John Wallace wrote:

> In my mobile I am currently running a 102" whip antenna on 10m which works fine.
> However, I would like to be able to use it on 12m as well. What I would like to
> do is to homebrew a fixed L/C tuner (pre-tuned for the middle of the 12m band)
> that I can just switch in when I want to work 12m, and out when I want to work
> 10m with no knobs to fiddle with. It also needs to handle around 400 watts. I
> would like to wind my own inductor etc. for it so I would need the coil
> dimensions, value of C, a schematic to see how this would all go together would
> also be extremely helpful (this is my first project of this sort). Any
> assistance anyone can offer is greatly appreciated.

You complicate the project considerably by your requirement to switch the netork in and out without leaving the drivers seat (if I understand correctly). For base station use a homemade trap would serve this purpose well, but would be unwieldy on a mobile whip.
You can use a ten meter Pro Am whip and change to a longer "stinger" for 12 meters. Or use a 12 meter whip and change to a shorter stinger for 10. You can use some older CB antennas and rewind them to use on the higher HF ham bands. I once did this for 17 meters and worked all over the world with an Icom 735 running 50 watts mobile.

Dick

438. Re: Does FM Skip????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 14:54:27 UTC
From: KB9TMP <NoMoreSpam4Me@antisocial.com>
Message-ID: <a21ftbrgi1@dagobah.blueriver.net>
Source record: 47280

"Frank Worm" <fworm@norpak.ca> wrote in message news:3C432ABD.2C172493@norpak.ca...
> This reason for this question is:
> I was having a debate with a geophysicist one day.
> He basically convinced me that FM although it does skip using the right
> freq. It tends to scatter as the carrier frequency is deviated therefore
> a
> radio would not be able to decode the message from a skipped signal.
> Only AM,CW or SSB is receivable from the skipped signal
> Is this true? He did seem to make sense.

I have a friend Charles (KB9VRX) who was just telling me last week that he was playing around with his new/used Icom radio on 10 meter and was talking to a fellow who was mobile in Georgia, using a 10 meter repeater in the Boston Mass area.

--

'73' From KB9TMP
NCI-2385

Beware of the man who works hard to learn something,
learns it, and finds himself no wiser than before. He is
full of murderous resentment of people who are ignorant
without having come by their ignorance the hard way.
-Peer's Law

439. Re: Crystal Filter Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 14:54:42 UTC
From: mikea@mikea.ath.cx
Message-ID: <SoX08.8315$1p7.1504898064@newssvr15.news.prodigy.com>
Source record: 47279

Jack Smith <jsmith@mnsinc.com> wrote:
: I was poking around the internet and found an interesting 292-page
: crystal tutorial at:

: http://www.corningfrequency.com/catalog/vig/vig-tutorial.pdf

: In particular, page 3-6 has a graphic that shows spurious crystal
: frequencies coupled with X-ray topographs showing the actual resonance
: modes for some of the major spurs.

: Perhaps more than anyone wants to know, but quite interesting.

Absolutely _Marvelous_ reference and tutorial. TYVM!

--
Cats give a whole new meaning to the phrase "fuzzy logic".
-- Seanette Blaylock, in nanae

440. Re: Does FM Skip????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 16:30:15 UTC
From: wb4una@aol.com
Message-ID: <20020115113015.13162.00001262@mb-dd.aol.com>
Source record: 47282

i have talk to JA's for some years on 10 meter FM. So you make your up your mind on who is right...

Randy

ARS: WB4UNA
Randy Chavis
247 Goff Court
West Columbia
S.C. 29172

441. I Want Datasheet MRF238

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 17:05:08 UTC
From: gerard.bethune@ca.u-picardie.fr
Message-ID: <3c4460b9.29098753@news.u-picardie.fr>
Source record: 47283

Hello All

My request is in the tittle.

I Want The Datasheet of the MRF238.

Thank You Very much.
73's
Gerard F6BXH

442. Re: Does FM Skip????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 17:37:02 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <sup84u4uuoi8un1jtn5920f7kegfgtvmq8@4ax.com>
Source record: 47284

On Thu, 10 Jan 2002 19:54:06 GMT, Frank Worm <fworm@norpak.ca> wrote:

>If a chicken band transceiver modulates FM will it skip
>and still be able to decode the message??

I take it you've never heard of NBFM activities on 29.6 MHz?

The answer to the question I think you're asking is yes, you can detect a NBFM signal that has skipped off the ionosphere. Like AM, however, it can suffer from the effects of selective fading. In other words, it won't always be intelligible. This is hardly any different than detecting a skipping AM signal.

I think that's the answer you're seeking.

73,

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

443. Re: Does FM Skip????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 17:54:08 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u48rf5pq7rs062@corp.supernews.com>
Source record: 47285

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3C439890.2FF0BB53@eznec.com...
> Strictly as Bob said it, I agree completely. That is,
> if theory doesn't agree with how something actually
> works, the theory is wrong, incomplete, or otherwise
> inadequate. But we do have to be careful to distinguish
> between how something actually works and how it appears to
> work.

There's another dimension we ought not to forget. Frequently the experts, and I would suggest especially experts from academia, don't understand the theory, or it's adequacy, nearly as well as they appear to. We used to have an old saying, "an expert is someone 25 miles from home."

Frequently, we amateurs understand the reality a lot better than the theoreticians. Propagation is only partly understood anyway. Yes, experienced hams can predict propagation a lot better than meteoroligists can predict the weather, but that doesn't mean that we understand what is happening. Only that we have a model that works reasonably well.

We still talk about "skip". Strictly speaking, your professor is right, FM doesn't skip, but then, neither do CW, SSB, etc. Skip is a model we hams use that reasonably well explains what we see. it has been known for some time that isn't what happens, heck, read the Handbook, its not a big secret. But that's OK, for our purposes, the model is accurate enough.

But as KB9TMP mentioned, run the experiment. Listen to the 10 meter FM segment, especially on spring afternoons. Then explain how FM doesn't "skip".

didleydadidah

444. FS: Vintage Meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 18:43:18 UTC
From: Walter Treftz <penguino@atlantic.net>
Message-ID: <3C447846.7BEAB666@atlantic.net>
Source record: 47286

VINTAGE METERS

Old Hallicrafters-style (like is on the SX-28) illuminated
milliammeters. Have internal pilot light installed in rear to
illuminate translucent scale with reddish-orange glow.

3" x 3" square bakelite case. Requires 2-3/4" panel hole.

All have lugs and 5000mfd mica bypass. As removed from a late
1930's or early 1940's 1KW AM/CW HF transmitter. Some could use
cleaning. Zero-set screws work. Movements free when rocked.
Deflection when tested using ohmmeter. Digital pictures
available. All are mfd by Triplett.

Model: Range: Price: Remarks:

321A 0-500madc $10.00 Missing pilot light fixture and
minor crack in face.
327A 0-150madc $15.00
321A 0-150madc $15.00
327A 0-300madc $15.00
327A 0-75 madc $15.00
0-200madc $ 8.00 Can't get apart, missing the
pilot light socket.

Walter Treftz (N4GL) --- penguino@atlantic.net ---

If not satisfied, return for complete refund.

445. Re: I Want Datasheet MRF238

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 19:20:20 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C448193.29E5@pop.removethistomailme.net>
Source record: 47287

gerard.bethune@ca.u-picardie.fr wrote:
>
> Hello All
>
> My request is in the tittle.
>
> I Want The Datasheet of the MRF238.
>
> Thank You Very much.
> 73's
> Gerard F6BXH

There's a little bit of info at
http://www.ajpotts.fsnet.co.uk/powertransistors.html.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

446. A couple of single board computers on auction site. One H8 and one 8051 clone.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 20:54:53 UTC
From: tongaloa <tongaloa@alltel.net>
Message-ID: <a224uv$g46$1@iac5.navix.net>
Source record: 47288

If any of you homebrew guys are interested, I have a couple
of single board computers with support stuff.
1) Hitachi H8 based This is 8MHz 16bit ROMless (uses external ROM, not
internal permanently blown) Has 1 meg ROM and 128k static RAM
plus power supplies, chassis, ZIF sockets etc.
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1689145269
2) Oki semiconductor 8051 clone based 8bit ROMless
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1689151825

Plenty of detailed photos and will probably go pretty cheap.

-bob
wb4mnf

447. Re: Product detector for communications receiver ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 22:10:08 UTC
From: Michael Black <blackm00@cam.org>
Message-ID: <Pine.LNX.4.20.0201151558490.28312-100000@darkstar.example.net>
Source record: 47289

On Sun, 13 Jan 2002, J M Noeding wrote:

> Collecting information about receiver technique to use on my web site,
> but I haven't found any proof when product detectors were used for the
> first time.
> A note in QST 1950 mentions the application of 6BE6, but it should
> indicate that older types like 6K8 or 6SA7 has already been used.
> Some early German application uses ACH1 (triode hexode)
>
> Have QST on CD, but only the period 1950-1959 and few loose magazines
> for the period 1947-1952, so I would be grateful if somebody could
> send me a circuit diagram or article from before 1950 as gif file to
> be used on my planned website on www.noding.com
>
> 73
> Jan-Martin
> LA8AK
> -
> remove ,xnd to reply
>

At first, I thought I couldn't come up with anything earlier. But
Don Stoner, in his "New Sideband Handbook" which came out in 1958,
says that Murray Crosby "invented the product detector". But
he doesn't mention a date.

Later in the book, it has a schematic for a phasing adaptor. Since
the associated text mentions such a thing being originally described
by Norgaard in the GE Ham News for July/August 1951, and then a more
commercial version was introduced as the Central Electronics Model A
"Slicer", it's not clear which the schematic comes from (or if it's
a newer design). But it just uses a 6AL5 diode for each channel,
as the mixer to translate the sideband down to audio.

In the ARRL's "Single Sideband for the Radio Amateur" (a collection of
articles from QST), first edition that came out in 1954, there's
an article by O.G. Villard, "Demodulation and Selectivity in SSB
Reception". It says the article is "from" an article in QST
for April 1948. There's no mention of "product detector" but
he does talk about frequency conversion for SSB (and, points out
why it would help for straight AM, I guess paving the way for
synchronous detectiion). There is a circuit, just a balanced mixer,
using two 6L7's. He does mention the stuff about turning down the
gain in an old receiver, or to the same effect, making the BFO stronger.
Certainly, that is mixing; there are all those old 432 and 1296 MHz
converters that fed the antenna into a single diode mixer.

I turn the page, and there is a circuit labelled "The Product Detector". The blurb says "Here is a useful detector for SSB reception, devised by Murray Crosby, W2CSY. It gets its name from its operation -- the output signal is proportional to the "product" of signals in two channels". The book says this is from an article "An All-purpose Super Selective IF Amplifier" in QST for March 1953. If that's the article I think it is, it is an intriguing scheme. Anyway, it uses three triodes, from 1.5 12AU7's.

Right under this, there is a passage that looks like it is new writing for the book:

" 'Product vs Envelope Detectors'
The interesting and significant thing about a product detector is that there is no output with the BFO turned off. Unlike an envelope detector, where two or more signals coming in will give a beat or beats, the product detector requires that the BFO voltage be present. Thus it is very similar to a mixer or converter stage, which also gives no output unless oscillator voltage is applied.

The advantage of the product detector is consequently that the output voltage consists solely of beats with the BFO and not cross-modulation beats between signals."

Later in the book, there is an article by Norgaard, which is "from 'Practical Single Sideband Reception' in QST for July 1948". This is about using phasing for SSB reception, and he again uses 6AL5's for the mixers, making sure the BFO is strong enough.

Maybe that helps? I don't have a scanner. I do wonder what was used in commercial circuits, especially since SSB was being used by AT&T long before it became common in ham radio. I do remember reading that the ring modulator came out of telephone use, though I can't remember where I would have read that. But I have no idea whether they were used at the receiving end.

Michael VE2BVW

448. Salvage Parts from a Microwave ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 23:29:42 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c44bae7.237968767@news.erols.com>
Source record: 47290

Greetings,

The family microwave burnt up today. Fire extinguished with standard
ABC-type device. Looks like the magnetron burned through into the little plastic
piece that covers it. Alas ! Any parts worth salvaging before I pitch it??

Thx de KG4JBM

Reticulum

Remove "your.hat" when replying via e-mail

449. Re: Need 19KHz Xtal

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-15 23:47:01 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C44BF75.F34C57C2@ieee.org>
Source record: 47291

Michael,

The original poster needed a 19 kHz crystal, which forms an oscillator at that frequency. My
suggestion was to use the 38 MHz crystal in an overtone oscillator, and divide that down to 19 kHz. If you divide 38.00053 MHz by 2000 you are within 0.265 Hz. The oscillator would easily adjust to the 1 Hz spec the poster was trying to reach.

I don't believe the original poster ever responded with what he was going to do....

Clyde

"Michael A. Terrell" wrote:

> Michael Black wrote:
> >
> > On Wed, 26 Dec 2001, Clyde R. Shappee wrote:
> >
> > > Yes, I did think of that, but the tolerances involved in the final signal are +/- 1
> > > Hz.
> > >
> > > This crystal would have to be very pullable, and the reality of this type of part is
> > > that it is not.
> > >
> > > The 38.00053MHz oscillator and associated divide chain yields an accuracy of nearly
> > > that unadjusted.
> > >
> > > Clyde
> > >
> > I thought the crystals in watches were 38.768KHz. Certainly in digital
> > watches, it's not going to be exactly 38KHz, because it's easier to
> > use binary counters, and they won't divide down evenly.
>
> Watch crystals are 32768 Hz so a simple 14 bit binary counter can
> generate a 1 Hz clock. Your figure is 6 kHz high.

450. Re: Antenna Matching Advice Needed (Homebrew Mobile Tuner)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 01:01:10 UTC
From: motsteve@mediaone.net
Message-ID: <motsteve-1501022003190001@dplane-176-88-250.pompano.net>
Source record: 47292
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

In article <a21imc$tr7lp$1@ID-124126.news.dfncis.de>, "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

> Irv, why didn't *I* think of that ? Sometimes it's so easy to overlook the
> glaringly obvious.
> ---
> Reg.
>
> ============================
> > Jusy clip a 'stinger' -- a couple feet of stiff wire onto
> > the end of the
> > hustler whip and trim it down to resonance.

Someone out there is going to laugh at me, but at my age, I don't care. If you have a 10mtr whip already, is it not possible to get one of the old telescoping whips for a CB portable, lash it to the top of the whip and then extend it when you want to operate at 12mtrs? I know this sounds like real "amateur radio", but what the heck, that's the way the hobby goes. :-)

BTW, for the purest, let's not worry about a return loss of 10 db versus 14 at the desired freq. Let's get on the air! Keep that Poynting vector pointing in the right direction. E X H, rah, rah, rah! :-)

Steve
WB4CZR
Plantation, FL

RF should be fun and not a pain.

451. Re: I Want Datasheet MRF238

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 02:22:55 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3C44E3FF.462DF3A9@ix.netcom.com>
Source record: 47293

It's a High Band (136-174 MHz) 3.7 watt in 30 watt out 9 dB gain device,
that's all I got..... It's probably long been obsoleted, knowing
Motorola.
Dan ac6ao

gerard.bethune@ca.u-picardie.fr wrote:

> Hello All
>
> My request is in the tittle.
>
> I Want The Datasheet of the MRF238.
>
> Thank You Very much.
> 73's
> Gerard F6BXH

452. Re: Need 19KHz Xtal

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 02:35:43 UTC
From: la8ak.xnd@online.no
Message-ID: <3c44d69a.116198591@news.online.no>
Source record: 47294

On Tue, 15 Jan 2002 23:47:01 GMT, "Clyde R. Shappee"
<cshappee@ieee.org> wrote:

>
>I don't believe the original poster ever responded with what he was going to do....
>
>Clyde
>
not always so easy with newsgroups....

On Wed, 26 Dec 2001 20:22:17 -0600, Jim Adney <jadney@vwtype3.org>
wrote:

>"J.F. FOURCADIER" <jf.fourcadier@wanadoo.fr_NOSPAM> wrote:
>
>>I think 19 kHz crystals are hard to find nowadays.
>
>Yes, this is correct, but I've already mentioned that I have EXACTLY
>the right 19,000Hz crystal for this application. And I have spares
>that are available for sale.
>
>-
>---
> Jim Adney jadney@vwtype3.org
> Madison,Wisconsin USA
>---

but no reason for us not to discuss the matter if you find it
interesting. Some collectors just need the original instrument, it is
a bad investment to buy a modified piece,

But since I never worried about such limitations I would suggest an
xtal oscillator in the 1-5MHz region and divide down to 19kHz using
binary counters like CD4060, don't bother that he has spares, this is
our technical discussion

73
LA8AK
--
remove ,xnd to reply

453. Re: Salvage Parts from a Microwave ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 02:35:44 UTC
From: la8ak.xnd@online.no
Message-ID: <3c44dc0e.117594363@news.online.no>
Source record: 47295

On Tue, 15 Jan 2002 23:29:42 GMT, Cathexis@yourhaterols.com
(Reticulum) wrote:

>Greetings,
>
> The family microwave burnt up today. Fire extinguished with standard
>ABC-type device. Looks like the magnetron burned through into the little plastic
>piece that covers it. Alas ! Any parts worth salvaging before I pitch it??
>
> Thx de KG4JBM
>
>
it was a discussion about the mains transformers for power amplifier
psu few years back

--
remove ,xnd to reply

454. Re: Need 19KHz Xtal

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 03:21:50 UTC
From: jcplpsm@aol.communicate
Message-ID: <20020115222150.01553.00001606@mb-cv.aol.com>
Source record: 47296

>I don't believe the original poster ever responded with what he was going to
>do....
>

Sorry, I went on vacation for a week and a half around Christmas. When I
arrived home I had an e-mail from a gentleman that had the crystal I needed.
I'm all set, but please continue with your discussion if you like.

Thanks for everyone's help.

SAM

455. FS: Air variable caps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 04:21:42 UTC
From: Bill & Suzie Whatley <spud286@attbi.com>
Message-ID: <qd718.29269$uA.327670@rwcrnsc51.ops.asp.att.net>
Source record: 47197

Cardwell 154-14-1 10 - 95 pF 0.140 plate spacing, good condition

Cardwell 154-15-1 15 - 140 pF 0.140 plate spacing, good condition

Cardwell 154-16-1 20 - 230 pF 0.140 plate spacing, minor damage on 3 of 55 plates.

Asking $10 each plus shipping from 80526.

WA5VRL
Willis
spud286@attbi.com

456. Re: Salvage Parts from a Microwave ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 04:38:30 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <Qv718.621$yN.586470435@news.inreach.com>
Source record: 47198

As already mentioned, the power transformer is useable, but it is necessary to punch out the extra laminations (shunts) between the primary and HV windings. And don't try lifing the grounded end of the HV winding and using it into a bridge rectifier without some careful testing. The insulation at that end is not meant to withstand several thousand volts DC.

There is a useable diode. I am using two of them in a homebrew power supply for my Collins 32S-3.

There are probably some fans and motors also. I used a microwave oven fan/motor to replace a 40+ year old fan with noisy bearings in my Johnson Thunderbolt. The new fan is quieter and moves a lot more air, thanks to the high tech plastic blades, compared to the old stamped aluminum ones.

Of course, these ideas depend on whether or not these parts were damaged when the fire happened.

Roger K6XQ

457. Re: Salvage Parts from a Microwave ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 04:59:44 UTC
From: Your Friend Bill <"Remove The NO In The Reply To Address"@coqui.net>
Message-ID: <3C4508BF.5454488C@coqui.net>
Source record: 47199

Roger Leone wrote:
>
> As already mentioned, the power transformer is useable, but it is necessary
> to punch out the extra laminations (shunts) between the primary and HV
> windings. And don't try lifing the grounded end of the HV winding and using
> it into a bridge rectifier without some careful testing. The insulation at
> that end is not meant to withstand several thousand volts DC.
>
> There is a useable diode. I am using two of them in a homebrew power supply
> for my Collins 32S-3.
>
> There are probably some fans and motors also. I used a microwave oven
> fan/motor to replace a 40+ year old fan with noisy bearings in my Johnson
> Thunderbolt. The new fan is quieter and moves a lot more air, thanks to the
> high tech plastic blades, compared to the old stamped aluminum ones.
>
> Of course, these ideas depend on whether or not these parts were damaged
> when the fire happened.
>
> Roger K6XQ

We did this thread with a washing machine? a short while back. Bottom
line was to save it all. Whatever it is, they don't make 'em like they
used to :-)
-BM

458. Re: Salvage Parts from a Microwave ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 05:43:40 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <Xs818.622$0%.587351059@news.inreach.com>
Source record: 47200

The NG needs an FAQ department...

Roger

459. Re: Salvage Parts from a Microwave ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 07:55:32 UTC
From: ok1sip@atlas.cz
Message-ID: <8f3e93b5.0201152355.3dc4ee7d@posting.google.com>
Source record: 47201

Hi Reticulum,
I would salvage:
1/ the HV transformer (often wanted for tube PA's etc.);
2/ microswitches;
3/ the motor with the revolving mechanism;
4/ the complete control microcomputer with keyboard and display if there is any;
5/ the timer if there is any;
6/ a cooling fan if there is any.

BR from Ivan

460. Re: DDS cleanup using PLL

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 12:44:11 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c4574f2$0$1779@echo-01.iinet.net.au>
Source record: 47202
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John
Many thanks for your comments
I will investigate this approach

Richard

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message
news:3C437E2E.7CE8@pop.removethistomailme.net...
> Richard Hosking wrote:
> >
> >snip
> > I was intending to use a Minicircuits VCO 45-75 MHz as the LO
> > This project is presumably not for the faint hearted. Have any of you
> > learned gentlemen had any experience of this?
> >
>
> By coincidence, I'm doing the exact same thing for a DC-daylight
> receiver LO, and with your AD9854 board, no less. :)
>
> The PLL reference clock in my design is:
>
> - AD9854 clocked at 100 MHz, output center frequency 10.7 MHz
> - 180 kHz ceramic FM IF filter bracketed by MCL T6-1 matching xfrmrs
> - MAR-6 MMIC amp to get the level back up to 0 dBm
> - MCL PLP-10.7 low-pass filter to clean up high-order overtones passed
> by the ceramic filter
>
> The phase detector will be an Analog Devices ADF4112 (ordered via
> Analog's direct-sales web site but not received yet). This is
> essentially a copy of the NatSemi PLLatinum chip with a programmable
> prescaler and more charge-pump gain.
>
> My VCO is a Mini-Circuits ROS-2150VW, driven from the 5V phase detector
> chip with a third-order loop filter based on an OP27 low-noise opamp.
> The ROS-2150VW is a nice part -- it's about US $30, and gives a full
> octave of coverage between 1.0 and 2.0 GHz. Phase noise is -96 dBc at
> 10 kHz, which is actually pretty respectable for a beast of this nature.
>
> Using a DDS with a narrow BPF as a PLL reference is absolutely the way
> to go, IMHO. The fixed BPF essentially acts like a very high-Q tracking
> filter. It allows the DDS to do what it's good at -- provide stable
> signals with a high degree of frequency precision -- while avoiding the
> sea of spectral garbage you usually get when you use a DDS as a PLL
> reference external to the loop.

>
> My current plan is to run the ADF4112's R counter at 3X, yielding a
> comparison frequency (Fcomp) of around 3.57 MHz. The synthesizer is
> required to cover the 1-2 GHz octave in full, so the N modulus will
> range from 280 to 560. The DDS tuning range will be about 38 kHz (Fcomp
> / Nmin * R).
>
> So far, I've tested the general idea with a Qualcomm Q2334 DDS driving a
> NatSemi LMX2326 PLLatinum chip through a 25 kHz-wide 11.5 MHz crystal
> filter (N=1043 at 1 GHz, R=12). The results have been really, really
> promising. With a narrow loop BW (1.5 kHz-3 kHz in most of my tests to
> date), the output at the Mini-Circuits VCO is the expected -96 dBc at 10
> Khz, which is already good enough for the adjacent-channel rejection I'm
> after. And there's not a spur in sight. I looked at about 100
> randomly-chosen frequencies between 1 and 2 GHz, and the output spectrum
> remained essentially identical at each of them.
>
> The 1 GHz plot is at http://209.95.122.40/jm/TRACE.GIF -- the outer plot
> is the LMX2326-based synthesizer, and the inner plot is from an HP8662A
> to mark the analyzer's own phase-noise floor.
>
> The LMX2326's prescaler is hardwired to 32X, so its minimum N modulus is
> 992. With the Analog part, I'll be able to reduce Nmin to 280 for
> almost 11 dB less noise. I'm thinking I can afford to widen the loop BW
> quite a bit with the new chip, and if so, I'm pretty sure it will be
> possible to get the performance of the final design close to my
> analyzer's own limits. I'm already within 6-7 dB of matching the
> performance of the synthesizer in my Icom R7000, which is a very complex
> multiloop dual-VCO beast.
>
> This is more than you wanted to know, probably, but if it helps you
> decide to use the narrowband-DDS-as-reference topology, it might be
> worth it. I've been really impressed with the simplicity, economy, and
> flexibility of this approach. It's hard to imagine doing it any other
> way... there just doesn't seem to be a downside.
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

461. Re: 160 meter antenna, need suggestions, limited space

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 13:03:27 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c457976$0$1776@echo-01.iinet.net.au>
Source record: 47203

We did 160M AM years ago in VK3
Most people used vertical antennas or a long wire which was effectively a top loaded vertical antenna.
Ground wave radiation was better with the vertical in theory at least. In practice it was difficult to get a half wave dipole far enough up to get it operate properly. To get a radiation resistance approaching 50-70 ohms you have to get it a good half wave above ground.
The problem with a short vertical is that it has a very low radiation resistance in the order of a few ohms. The ground connection typically has a resistance of 20-30 ohms for a large number of buried radials (say 20-30 1/4 wave radials). This means the antenna efficiency is only 5-10% as most of the power is dissipated in the ground resistance. You can increase radiation resistance by top loading the antenna (say a capacity hat) which makes it look electrically longer at the feedpoint. This also makes the current distribution in the antenna more equal
The simplest scheme is to get the longest, highest wire up you can and feed it against the best ground you can. You will have to probably step 50 ohms down to a lower impedance, depending on ground resistance plus radiation resistance and load the antenna out to a quarter wave.
A good book on the subject is

Low band DXing
by John Devoldere ON4UN

Richard

"gudmundur" <hexter@blazenet.net> wrote in message
news:u444arcmcuej61@corp.supernews.com...
> I have limited space for this 160 meter project. Also, I am interested
> in an antenna for local ground wave coverage as opposed to sky wave dx
> use. Is there such a thing as a 160mtr 'mobile vertical' such as the
> ham stick type antennas? I have heard of the 'snake' antenna, which I
> understand is nothing more than insulated wire laying on the ground.
> The intent here is that a few local hams and I want to get some 160m
> experience using old converted maritine AM units of perhaps 25w output
> power. Our problem on 80 mtrs seemed to be that we 'skipped' right out
> over each other. I could get good 5/9 reports from Florida at apprx
> 1200 miles away, and could barely hear my freinds of only 12 miles away.
>
> Any suggestions? A beam simply isn't practicle, and I doubt I have room
> for a folded dipole, so I am thinking base loaded vertical here.
>

462. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 13:25:10 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c457e8d$0$1767@echo-01.iinet.net.au>
Source record: 47204
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

We achieved 55-60dB sideband suppression using the polyphase network and a Johnson Ring counter arrangement for the RF quadrature generator up to about 10 MHz. Admittedly this was trimmed for best result and drift may have been a problem in the long term.(See Electronics and Wireless World Jan 1996) Using proper pole frequency selection you could get quite good accuracy from 100Hz to about 8 KHz and the network is quite tolerant of error (in fact I inadvertedly shorted or open circuited components on occasion without major loss of performance.)
The problems were component count and in band losses (while out of band signals were attenuated much less)

Richard

"Hans Summers" <Hans.Summers@Tudor.Com> wrote in message news:a1mumt$ra4n0$1@ID-61331.news.dfncis.de...
>
> Don't forget polyphase shifting networks as opposed to the two-chanel types.
> They can acheive a much better sideband suppression but there are losses
> associated with the network. However according to a 1995 QEX article,
> instead of choosing a single value resistance or capacitance throughout the
> network, if you vary resistance and capacitances from column to column in
> the right way it is possible to obtain a flat response. I have built an
> 8-stage network using 0.1% resistors and capacitors also matched to within
> 0.1%. The values are calculated according to the QEX article. I have as yet
> not properly measured the response of the network, but at one frequency (1.8
> kHz) looked at so far, the network actually showed a gain of 4dB with the
> values I used. I plan to use a Huff & Puff stabilised VFO at 56-64 MHz, to
> divide by 4 for coverage of 160m, 80m, 40m and 20m bands, driving a Tayloe
> switching detector. My Huff Puff VFO Stabiliser information page is at
> http://www.hanssummers.com/radio/huffpuff/contents.htm and details of my
> Huff Puff VFO circuit are at
> http://www.hanssummers.com/radio/huffpuff/fast/index.htm. At the bottom of
> this page is a photo of my polyphase network, though I have since then added
> the Tayloe detector and a 160m bandpass filter.
>
> ------------------
> Hans Summers
> http://www.HansSummers.Com
>

>
>
> "Jim Pennell" <NoSpam@killspam.com> wrote in message
> news:a1lqe2hgf1@slb1.atl.mindspring.net...
> > "Mark Bell" <bell@blazenet.net> wrote in message
> > news:u39sj52qbs7k81@corp.supernews.com...
> > >
> > > What type of SSB generator will produce the best sideband
> > >suppression, filter or phasing?
> > >
> >
> >
> > My Understanding is that phasing systems typically get around 35 - 40
dB
> > sideband supression if everything is near perfect... The problem is
> usually
> > slight differences in the amplitude and phasing of the two audio
channels.
> > Well, that, and variation in the RF 90 degree LO splitter that changes
the
> > RF pahse shift from one end of the band to the other.....
> >
> > And, there is some change over time and temperature that usually
> degrades
> > the supression by a few more dB as time goes by.
> >
> > The audio tends to sound 'better' since it isn't filtered to be as
> narrow
> > a bandwidth as most crystal filter rigs.
> >
> > ==========================
> >
> > A good crystal filter type transmitter usually has better sideband
> > supression and it also doesn't change much with time and temperature.
> It
> > also lends itself to making a transciever more easily since the filters
> and
> > oscillators are already in place.
> >
> >
> >
> > Jim Pennell
> > N6BIU
> >
> >
> >
>
>

463. Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 13:41:14 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0201160541.3955e074@posting.google.com>
Source record: 47205

Slightly off topic, but I was curious if any other homebrewers or professionals have this pet peeve....

I was hooking up an expensive GasFET LNA (20 GHz, 40 dB gain, 4 dB noise figure)the other day, so I could work on my noise figure algorithm. (Part of my job is to design signal processing algorithms for RF measurements on a computer.) Well, something wasn't working right so I went and checked the power supply. I had the leads reversed. Fortunately the amplifier has some sort of protection built in.

The power supply has some bananna jacks, the main part being some generic color that looks nice but serves no useful purpose. The base mounting rings are smaller than on most bananna jacks I have seen. There are three, for + - and chassis ground. There are tiny + and - marks next to the + and - jacks, but the panel is a bit crowded and they are hard to see, particulary with bifocals.

Another guy looked at them (the bananna jacks) for me and said that the bases of the jacks are red, green, and gray (for + ground and -). I never noticed because, to me, they have very poor color contrast. When he pointed it out I said they looked green, greener, and (a rather poor excuse for) gray.

Now, lets say that a conservative 90% of EEs and techs are male. Of these a conservative 10% will have a problem with colors like I have (not completely, just certain shades of red and green). That makes at least 9% of EEs and techs. Knowing this, why can't companys use colors that are easier for us to see? I can certainly see some reds and greens.

Same thing applies to resistor colors. The good ole EIA colors they used back in the 60's and 70's I have no problem with, but the newer imported carbon films use different shades, and I always have to verify them with an ohmmeter.

Same thing applies to flying. I can't fly at night because the colors of lights they use (red and green) I can't see. Green looks like washed out blueish-pink to me.

Jim
N8EE

464. Microwave materials properties help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 16:10:19 UTC
From: JB <john_joanneb@yahoo.com>
Message-ID: <a248dt$8f4$1@shale.ftech.net>
Source record: 47206
Cross-posted to: uk.radio.amateur,rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Can anyone please help with any good leads on where to find a table of transmission or blocking properties, (attenuation :vs: freq?), for typical engineering polymers and coatings for polymers (conductive EMC shield paints?).
I'm particulary interested in the 2GHz-7GHz range.
Many thanks in advance,
JB

please excuse the cross-post

465. Re: 160 meter antenna, need suggestions, limited space

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 16:13:43 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3C45A6B7.58BCDF37@ieee.org>
Source record: 47207

Richard Hosking wrote:

> We did 160M AM years ago in VK3
> Most people used vertical antennas or a long wire which was effectively a
> top loaded vertical antenna.
> Ground wave radiation was better with the vertical in theory at least. In
> practice it was difficult to get a half wave dipole far enough up to get it
> operate properly. To get a radiation resistance approaching 50-70 ohms you
> have to get it a good half wave above ground.
> The problem with a short vertical is that it has a very low radiation
> resistance in the order of a few ohms. The ground connection typically has a
> resistance of 20-30 ohms for a large number of buried radials (say 20-30 1/4
> wave radials). This means the antenna efficiency is only 5-10% as most of
> the power is dissipated in the ground resistance. You can increase radiation
> resistance by top loading the antenna (say a capacity hat) which makes it
> look electrically longer at the feedpoint. This also makes the current
> distribution in the antenna more equal
> The simplest scheme is to get the longest, highest wire up you can and feed
> it against the best ground you can. You will have to probably step 50 ohms
> down to a lower impedance, depending on ground resistance plus radiation
> resistance and load the antenna out to a quarter wave.
> A good book on the subject is
>
> Low band DXing
> by John Devoldere ON4UN
>
> Richard

Good advice and I might add my experience. I had a vertical that performed
poorly
and some kind soul advised that I should lower the resonant frequency (top
loaded)
and cancel the reactance at the feed point with a capacitor. That raised the
feed point
to 200 Ohms. I then used a transformer (tapped coil) to get 50 Ohms for the
transmission
line.

The result was much better signal reports.

Bill K7NOM

466. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 17:11:13 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C45B431.5B58BC88@ieee.org>
Source record: 47208

Yes, I do.

I sometimes cannot read brown from red on a resistor, and it was only a little while ago that I realized all 1% resistors have a brown band for the tolerance. I can certainly tell a red light from a green light in traffic, but red and green lights on airplanes forget it.

My step mother sent me gold toe sox for Christmas. It is cruel. Three pair, black, blue, and brown. I can match them up, but have a hard time particularly with the black and blue.

You are not alone.

When I was a child, I'd ask my mother what color something was, and she'd reply, "oh, that's plain color".

Now I understand.

Clyde

JLB wrote:

> Slightly off topic, but I was curious if any other homebrewers or
> professionals have this pet peeve....
>
> I was hooking up an expensive GasFET LNA (20 GHz, 40 dB gain, 4 dB
> noise figure)the other day, so I could work on my noise figure
> algorithm. (Part of my job is to design signal processing algorithms
> for RF measurements on a computer.) Well, something wasn't working
> right so I went and checked the power supply. I had the leads
> reversed. Fortunately the amplifier has some sort of protection built
> in.
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> The power supply has some bananna jacks, the main part being some
> generic color that looks nice but serves no useful purpose. The base
> mounting rings are smaller than on most bananna jacks I have seen.
> There are three, for + - and chassis ground. There are tiny + and -
> marks next to the + and - jacks, but the panel is a bit crowded and
> they are hard to see, particulary with bifocals.
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> Another guy looked at them (the bananna jacks) for me and said that
> the bases of the jacks are red, green, and gray (for + ground and -).
> I never noticed because, to me, they have very poor color contrast.
> When he pointed it out I said they looked green, greener, and (a
> rather poor excuse for) gray.
>
> Now, lets say that a conservative 90% of EEs and techs are male. Of

> these a conservative 10% will have a problem with colors like I have
> (not completely, just certain shades of red and green). That makes at
> least 9% of EEs and techs. Knowing this, why can't companys use
> colors that are easier for us to see? I can certainly see some reds
> and greens.
>
> Same thing applies to resistor colors. The good ole EIA colors they
> used back in the 60's and 70's I have no problem with, but the newer
> imported carbon films use different shades, and I always have to
> verify them with an ohmmeter.
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> Same thing applies to flying. I can't fly at night because the colors
> of lights they use (red and green) I can't see. Green looks like
> washed out blueish-pink to me.
>
> Jim
> N8EE

467. WANTED: Triad M-15 30W Mod Transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 17:49:54 UTC
From: Chuck O'Neal <coneal@ultranet.com>
Message-ID: <a24ej0$9ks$1@bob.news.rcn.net>
Source record: 47209
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Anyone have one of these? Good $$$ reward or
trade for one!
73,
Chuck..K1KW

468. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 17:58:18 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <3C45BED4.A0C4C0C2@flash.net>
Source record: 47210

Hi,
Luckily for me, I have no problems identifying colors in the lab or elsewhere, though the imported resistor colors are often impossible to tell if it's a red or brown, as you say.
We had an EE in my lab some years ago who was completely colorblind. His wife used to dress him, and he'd usually wear the same jacket all the time. He was a brilliant engineer, but would never do his own breadboarding due to not being able to tell colors. I never knew he was colorblind until one day I asked him why he never did any breadboarding, as all the other engineers also worked on the bench--and that's when I found out.
I can surely sympathize with you, though!
Steve

JLB wrote:
>
> Slightly off topic, but I was curious if any other homebrewers or
> professionals have this pet peeve....
>
> I was hooking up an expensive GasFET LNA (20 GHz, 40 dB gain, 4 dB
> noise figure)the other day, so I could work on my noise figure
> algorithm. (Part of my job is to design signal processing algorithms
> for RF measurements on a computer.) Well, something wasn't working
> right so I went and checked the power supply. I had the leads
> reversed. Fortunately the amplifier has some sort of protection built
> in.
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> The power supply has some bananna jacks, the main part being some
> generic color that looks nice but serves no useful purpose. The base
> mounting rings are smaller than on most bananna jacks I have seen.
> There are three, for + - and chassis ground. There are tiny + and -
> marks next to the + and - jacks, but the panel is a bit crowded and
> they are hard to see, particulary with bifocals.
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> Another guy looked at them (the bananna jacks) for me and said that
> the bases of the jacks are red, green, and gray (for + ground and -).
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> Now, lets say that a conservative 90% of EEs and techs are male. Of
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> least 9% of EEs and techs. Knowing this, why can't companys use

> colors that are easier for us to see? I can certainly see some reds
> and greens.
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> used back in the 60's and 70's I have no problem with, but the newer
> imported carbon films use different shades, and I always have to
> verify them with an ohmmeter.
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> Same thing applies to flying. I can't fly at night because the colors
> of lights they use (red and green) I can't see. Green looks like
> washed out blueish-pink to me.
>
> Jim
> N8EE

469. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 18:04:57 UTC
From: Frank Worm <fworm@norpak.ca>
Message-ID: <3C45C13C.47A4F1C@norpak.ca>
Source record: 47211

LOL
Reminds me of a company I once worked for who
hired a Q.A. Tech, who was colourblind. Poor guy got fired
after the boss found out.

Steve Ratzlaff wrote:

> Hi,
> Luckily for me, I have no problems identifying colors in the lab or
> elsewhere, though the imported resistor colors are often impossible to
> tell if it's a red or brown, as you say.
> We had an EE in my lab some years ago who was completely colorblind. His
> wife used to dress him, and he'd usually wear the same jacket all the
> time. He was a brilliant engineer, but would never do his own
> breadboarding due to not being able to tell colors. I never knew he was
> colorblind until one day I asked him why he never did any breadboarding,
> as all the other engineers also worked on the bench--and that's when I
> found out.
> I can surely sympathize with you, though!
> Steve
>
> JLB wrote:
> >
> > Slightly off topic, but I was curious if any other homebrewers or
> > professionals have this pet peeve....
> >
> > I was hooking up an expensive GasFET LNA (20 GHz, 40 dB gain, 4 dB
> > noise figure)the other day, so I could work on my noise figure
> > algorithm. (Part of my job is to design signal processing algorithms
> > for RF measurements on a computer.) Well, something wasn't working
> > right so I went and checked the power supply. I had the leads
> > reversed. Fortunately the amplifier has some sort of protection built
> > in.
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> > The power supply has some bananna jacks, the main part being some
> > generic color that looks nice but serves no useful purpose. The base
> > mounting rings are smaller than on most bananna jacks I have seen.
> > There are three, for + - and chassis ground. There are tiny + and -
> > marks next to the + and - jacks, but the panel is a bit crowded and
> > they are hard to see, particulary with bifocals.
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> > Another guy looked at them (the bananna jacks) for me and said that
> > the bases of the jacks are red, green, and gray (for + ground and -).
> > I never noticed because, to me, they have very poor color contrast.
> > When he pointed it out I said they looked green, greener, and (a

> > rather poor excuse for) gray.
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> > Now, lets say that a conservative 90% of EEs and techs are male. Of
> > these a conservative 10% will have a problem with colors like I have
> > (not completely, just certain shades of red and green). That makes at
> > least 9% of EEs and techs. Knowing this, why can't companys use
> > colors that are easier for us to see? I can certainly see some reds
> > and greens.
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> > Same thing applies to resistor colors. The good ole EIA colors they
> > used back in the 60's and 70's I have no problem with, but the newer
> > imported carbon films use different shades, and I always have to
> > verify them with an ohmmeter.
> >
> > Same thing applies to flying. I can't fly at night because the colors
> > of lights they use (red and green) I can't see. Green looks like
> > washed out blueish-pink to me.
> >
> > Jim
> > N8EE

470. Re: Salvage Parts from a Microwave ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 19:49:17 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <tfl42a.via.ln@my.linux.box>
Source record: 47216

In article <Xs818.622$0%.587351059@news.inreach.com>, Roger Leone wrote:
> The NG needs an FAQ department...
>
> Roger

It sure does, are you volunteering?

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

471. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 20:18:10 UTC
From: k5dh@raytheon.com
Message-ID: <6el18.306$kY4.5844@dfw-service2.ext.raytheon.com>
Source record: 47212

Hi Jim,

I'm not colorblind at all, yet I have trouble reading the pastel
colors that some modern components are marked with, especially
resistors. I often have to use an Ohmmeter to check them.

73,
Dean W. Hemphill, K5DH -- Senior Technical Support Specialist
Raytheon Electronic Systems
RF & Microwave Test Engineering
Dallas, Texas
Phone: 972.344.2682 Email: k5dh@raytheon.com
Pager: 972.297.1398 FAX: 972.344.5201

In article <8d5ec8a2.0201160541.3955e074@posting.google.com>,
jim.bolinger@lintek.aeroflex.com says...
>
>Slightly off topic, but I was curious if any other homebrewers or
>professionals have this pet peeve....
>
>I was hooking up an expensive GasFET LNA (20 GHz, 40 dB gain, 4 dB
>noise figure)the other day, so I could work on my noise figure
>algorithm. (Part of my job is to design signal processing algorithms
>for RF measurements on a computer.) Well, something wasn't working
>right so I went and checked the power supply. I had the leads
>reversed. Fortunately the amplifier has some sort of protection built
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>There are three, for + - and chassis ground. There are tiny + and -
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>they are hard to see, particulary with bifocals.
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>Another guy looked at them (the bananna jacks) for me and said that
>the bases of the jacks are red, green, and gray (for + ground and -).
>I never noticed because, to me, they have very poor color contrast.
>When he pointed it out I said they looked green, greener, and (a
>rather poor excuse for) gray.
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>these a conservative 10% will have a problem with colors like I have
>(not completely, just certain shades of red and green). That makes at
>least 9% of EEs and techs. Knowing this, why can't companys use

>colors that are easier for us to see? I can certainly see some reds
>and greens.
>
>Same thing applies to resistor colors. The good ole EIA colors they
>used back in the 60's and 70's I have no problem with, but the newer
>imported carbon films use different shades, and I always have to
>verify them with an ohmmeter.
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>Same thing applies to flying. I can't fly at night because the colors
>of lights they use (red and green) I can't see. Green looks like
>washed out blueish-pink to me.
>
>Jim
>N8EE

472. High Voltage Arcing???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 20:18:28 UTC
From: Edward2001 <Edward2001@peoplepc.com>
Message-ID: <3C45E014.D8094A7E@peoplepc.com>
Source record: 47226

We have a problem (when we are burning in some high voltage tubes), with the anode arcing over to the filament. The anode is being run at 60 Kilovolts, with a current of 5 milliamps. The filament is being run by a transformer, through some relay contacts. The arcing plays havoc with the relay contacts, and some other circuitry. I would like to short out these high voltage spikes, before they get to the relay contacts. Would a varistor be capable of handling this kind of spike? Is there a better way to do this? Are all 300 watts, being fed back to the relay contacts, or is much of it being dissipated by the tube? Any help or input would be appreciated.
Thanks in advance,
Brian

473. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 20:31:39 UTC
From: Gary Glaenzer <nobulltrans@irtc.net>
Message-ID: <Kql18.110$8w2.15728701@news2.randori.com>
Source record: 47213

"K5DH" <k5dh@raytheon.com> wrote in message
news:6el18.306$kY4.5844@dfw-service2.ext.raytheon.com...
> Hi Jim,
>
> I'm not colorblind at all, yet I have trouble reading the pastel
> colors that some modern components are marked with, especially
> resistors. I often have to use an Ohmmeter to check them.
>
> 73,
> Dean W. Hemphill, K5DH -- Senior Technical Support Specialist
> Raytheon Electronic Systems
> RF & Microwave Test Engineering
> Dallas, Texas
> Phone: 972.344.2682 Email: k5dh@raytheon.com
> Pager: 972.297.1398 FAX: 972.344.5201
>
>
> In article <8d5ec8a2.0201160541.3955e074@posting.google.com>,
> jim.bolinger@lintek.aeroflex.com says...
> >
> >Slightly off topic, but I was curious if any other homebrewers or
> >professionals have this pet peeve....
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> >washed out blueish-pink to me.
> >
> >Jim
> >N8EE
>
>
>

474. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 20:33:45 UTC
From: Gary Glaenzer <nobulltrans@irtc.net>
Message-ID: <lsl18.111$8w2.15073424@news2.randori.com>
Source record: 47214

I've got a problem with red-orange-green perception, and find that I do all right outside in the sunlight, but under florescent lights it's time for the meter.

This goes for both resistors and wires (and valve body springs in transmission shift kits, but that's another story).

When I worked for EMI music, someone decided it would be a good idea to color-code the cabling for the four audio channels going into the cassette tape duplicators.....yup, they chose red, orange, green, and brown.

"K5DH" <k5dh@raytheon.com> wrote in message news:6el18.306$kY4.5844@dfw-service2.ext.raytheon.com...
> Hi Jim,
>
> I'm not colorblind at all, yet I have trouble reading the pastel
> colors that some modern components are marked with, especially
> resistors. I often have to use an Ohmmeter to check them.
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> 73,
> Dean W. Hemphill, K5DH -- Senior Technical Support Specialist
> Raytheon Electronic Systems
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>
>
> In article <8d5ec8a2.0201160541.3955e074@posting.google.com>,
> jim.bolinger@lintek.aeroflex.com says...
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> >of lights they use (red and green) I can't see. Green looks like
> >washed out blueish-pink to me.
> >
> >Jim
> >N8EE
>
>
>

475. Re: Microwave materials properties help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 21:21:36 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C45EEE0.6DB4C1DD@eznec.com>
Source record: 47215
Cross-posted to: uk.radio.amateur,rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Last I checked, there was a wide variety of formulations and materials available, and I'd hesitate to accept any "typical" values.

A Google web search of "EMI coatings" gave about 80 hits, mostly coating manufacturers. Any of these should be able to furnish detailed information about their products, and you'll probably find quite a bit on their web pages.

If you're interested in absorptive coatings, see Emerson & Cuming's offerings at http://www.eccosorb.com.

Roy Lewallen, W7EL

JB wrote:
>
> Can anyone please help with any good leads on where to find a table of
> transmission or blocking properties, (attenuation :vs: freq?), for typical
> engineering polymers and coatings for polymers (conductive EMC shield
> paints?).
> I'm particulary interested in the 2GHz-7GHz range.
> Many thanks in advance,
> JB
>
> please excuse the cross-post

476. Looking for a resistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 22:40:51 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C460173.429E1211@ieee.org>
Source record: 47217

Hello,

I am looking for a power resistor, 20 W, 8000 ohms. It is tubular, with radial leads. 0.6 inches diameter, about 2.4 inches long. I believe it was manufactured by IRC. It is the cement kind.

I have looked everywhere, Surplus sales, Dans, Ocean State, Debco....

Any clues?

Clyde

KA1CRV

PLS Pardon me if I posted here before. Didn't find it in my sent box....

477. 40metter antenna/tunner.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 23:22:52 UTC
From: Kc7eip <kc7eip@shaw.ca>
Message-ID: <Xns91989C699DDEEkc7eipshawca@24.64.223.211>
Source record: 47218

Well i'm in the process of putting togeter one of the pixxie II Radio for the QRPp-i group and well i need to ad an antenna to the design for 40 meters...The least expensive the better...To throw a big wrench in the project i do not have an antenna tunner... I do have a swr meter though..any suggestions...

478. Searching article abt SSB RX in QST June 41/April 1948

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 23:35:28 UTC
From: la8ak.xnd@online.no
Message-ID: <3c460bac.195332710@news.online.no>
Source record: 47219

Searching the following article. Unfortunately I haven't QST CD for
this period, seems to be next choice...

June 1941
J.L.A. McLaughlin "The Selectable Single Sideband Receiving
System" p.16 (50 kHz IF strip with switched second LO
and carrier channel for tuning purposes)
(see also April 1948)(SSB)

I am only interested to see what sort of detector is used, so I might
need only one page, gif or other formate is most useful

I might be interested to see the notes referred to in April 48
J.L.A. McLaughlin "Selectable Single-Sideband Reception
Simplified" p.11(AM 50 kHz IF 3 tube circuit, no BFO,
for AM reception) (SSB)

Villard "Selectivity in SSSC (SSB) Reception" p.19
(balanced mixer)

Grammer "SSSC (SSB) and SSSR" p.29

but again, still wish to see only the application of product detector

hpe 2 hr fm u sn
73
Jan-Martin
LA8AK
--
remove ,xnd to reply

479. Re: Looking for a resistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 23:39:24 UTC
From: funkbastler <funkbastler@delete-this.yahoo.com>
Message-ID: <4k3c4u0bg5vka23if2qjbqluvbkj6audoo@4ax.com>
Source record: 47220

On Wed, 16 Jan 2002 22:40:51 GMT, "Clyde R. Shappee"
<cshappee@ieee.org> wrote:

>Hello,
>
>I am looking for a power resistor, 20 W, 8000 ohms. It is tubular, with
>radial leads. 0.6 inches diameter, about 2.4 inches long. I believe it
>was manufactured by IRC. It is the cement kind.
>
>I have looked everywhere, Surplus sales, Dans, Ocean State, Debco....
>
>Any clues?
>
>Clyde
>
>KA1CRV
>
>PLS Pardon me if I posted here before. Didn't find it in my sent
>box....

Does it have to be an exact (physical) match? Consider 2K/5W
resistors (4 in series) or 8K/5W (4 in series/parallel) if you don't
need an exact replacement. You can get those from DigiKey.

480. Re: 160 meter antenna, need suggestions, limited space

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-16 23:40:42 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c460ec8$0$4885@echo-01.iinet.net.au>
Source record: 47221

Unless you had a very tall vertical (say a couple of hundred feet), I suspect most of the 200 ohms was ground resistance. With a typical short vertical of 30 feet or so the radiation resistance would be a few ohms (say 5 _- I would have to look up the tables). Assuming the antenna was loaded to resonance and impedance matched correctly, this would give a radiation efficiency of 5/200 or about 2.5% ie most of the power is lost in the ground. Even with a quarter wave vertical (ie around 40 metres high) its theoretical radiation resistance is only 35 ohms. Depending on the type of soil and other local factors, it takes a lot of copper in the ground to get a reasonably efficient ground connection.

Richard

"Bill Janssen" <billj@ieee.org> wrote in message
news:3C45A6B7.58BCDF37@ieee.org...
>
>
> Richard Hosking wrote:
>
> > We did 160M AM years ago in VK3
> > Most people used vertical antennas or a long wire which was effectively
a
> > top loaded vertical antenna.
> > Ground wave radiation was better with the vertical in theory at least.
In
> > practice it was difficult to get a half wave dipole far enough up to get
it
> > operate properly. To get a radiation resistance approaching 50-70 ohms
you
> > have to get it a good half wave above ground.
> > The problem with a short vertical is that it has a very low radiation
> > resistance in the order of a few ohms. The ground connection typically
has a
> > resistance of 20-30 ohms for a large number of buried radials (say 20-30
1/4
> > wave radials). This means the antenna efficiency is only 5-10% as most
of
> > the power is dissipated in the ground resistance. You can increase
radiation
> > resistance by top loading the antenna (say a capacity hat) which makes
it
> > look electrically longer at the feedpoint. This also makes the current
> > distribution in the antenna more equal
> > The simplest scheme is to get the longest, highest wire up you can and
feed

> > it against the best ground you can. You will have to probably step 50
ohms
> > down to a lower impedance, depending on ground resistance plus radiation
> > resistance and load the antenna out to a quarter wave.
> > A good book on the subject is
> >
> > Low band DXing
> > by John Devoldere ON4UN
> >
> > Richard
>
> Good advice and I might add my experience. I had a vertical that performed
> poorly
> and some kind soul advised that I should lower the resonant frequency (
top
> loaded)
> and cancel the reactance at the feed point with a capacitor. That raised
the
> feed point
> to 200 Ohms. I then used a transformer (tapped coil) to get 50 Ohms for
the
> transmission
> line.
>
> The result was much better signal reports.
>
> Bill K7NOM
>

481. Re: 160 meter antenna, need suggestions, limited space

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 00:05:54 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3C461561.C81E02B4@ieee.org>
Source record: 47222

In my case the antenna was resonant at about 1.6 to 1.7 MHz. This gave
inductive
reactance at 1.8 MHz. the reactance was canceled using a capacitor.

Bill K7NOM

Richard Hosking wrote:

> Unless you had a very tall vertical (say a couple of hundred feet), I
> suspect most of the 200 ohms was ground resistance. With a typical short
> vertical of 30 feet or so the radiation resistance would be a few ohms (say
> 5 _- I would have to look up the tables). Assuming the antenna was loaded to
> resonance and impedance matched correctly, this would give a radiation
> efficiency of 5/200 or about 2.5% ie most of the power is lost in the
> ground. Even with a quarter wave vertical (ie around 40 metres high) its
> theoretical radiation resistance is only 35 ohms. Depending on the type of
> soil and other local factors, it takes a lot of copper in the ground to get
> a reasonably efficient ground connection.
>
> Richard
>
> "Bill Janssen" <billj@ieee.org> wrote in message
> news:3C45A6B7.58BCDF37@ieee.org...
> > >
> > > Richard Hosking wrote:
> > >
> > > > We did 160M AM years ago in VK3
> > > > Most people used vertical antennas or a long wire which was effectively
> a
> > > > top loaded vertical antenna.
> > > > Ground wave radiation was better with the vertical in theory at least.
> In
> > > > practice it was difficult to get a half wave dipole far enough up to get
> it
> > > > operate properly. To get a radiation resistance approaching 50-70 ohms
> you
> > > > have to get it a good half wave above ground.
> > > > The problem with a short vertical is that it has a very low radiation
> > > > resistance in the order of a few ohms. The ground connection typically
> has a
> > > > resistance of 20-30 ohms for a large number of buried radials (say 20-30
> 1/4
> > > > wave radials). This means the antenna efficiency is only 5-10% as most
> of

> > > the power is dissipated in the ground resistance. You can increase
> radiation
> > > resistance by top loading the antenna (say a capacity hat) which makes
> it
> > > look electrically longer at the feedpoint. This also makes the current
> > > distribution in the antenna more equal
> > > The simplest scheme is to get the longest, highest wire up you can and
> feed
> > > it against the best ground you can. You will have to probably step 50
> ohms
> > > down to a lower impedance, depending on ground resistance plus radiation
> > > resistance and load the antenna out to a quarter wave.
> > > A good book on the subject is
> > >
> > > Low band DXing
> > > by John Devoldere ON4UN
> > >
> > > Richard
> >
> > Good advice and I might add my experience. I had a vertical that performed
> > poorly
> > and some kind soul advised that I should lower the resonant frequency (
> top
> > loaded)
> > and cancel the reactance at the feed point with a capacitor. That raised
> the
> > feed point
> > to 200 Ohms. I then used a transformer (tapped coil) to get 50 Ohms for
> the
> > transmission
> > line.
> >
> > The result was much better signal reports.
> >
> > Bill K7NOM
> >

482. Re: Searching article abt SSB RX in QST June 41/April 1948

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 00:15:15 UTC
From: Your Friend Bill <"Remove The NO In The Reply To Address"@coqui.net>
Message-ID: <3C461793.F8C59E48@coqui.net>
Source record: 47223

J M Noeding wrote:
>
> Searching the following article. Unfortunately I haven't QST CD for
> this period, seems to be next choice...

J-M,
I think I have it here in the 1955 ARRL Handbook...uses 12AU7s as a product detector. I don't have a scanner but if no one else can provide the info, I can take a digital snapshot of that part of the ckt.

-Bill WX4A

483. Re: Looking for a resistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 01:19:15 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C462693.C9272E57@ieee.org>
Source record: 47224

Well, an exact match would be Ideal, as it would fit nicely in the
chassis....

If I don't find it, I'll have to resort to some combo, under the chassis
solution.

Clyde

funkbastler wrote:

> On Wed, 16 Jan 2002 22:40:51 GMT, "Clyde R. Shappee"
> <cshappee@ieee.org> wrote:
>
> >Hello,
> >
> >I am looking for a power resistor, 20 W, 8000 ohms. It is tubular, with
> >radial leads. 0.6 inches diameter, about 2.4 inches long. I believe it
> >was manufactured by IRC. It is the cement kind.
> >
> >I have looked everywhere, Surplus sales, Dans, Ocean State, Debco....
> >
> >Any clues?
> >
> >Clyde
> >
> >KA1CRV
> >
> >PLS Pardon me if I posted here before. Didn't find it in my sent
> >box....
>
> Does it have to be an exact (physical) match? Consider 2K/5W
> resistors (4 in series) or 8K/5W (4 in series/parallel) if you don't
> need an exact replacement. You can get those from DigiKey.

484. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 02:13:15 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C4632F2.28D@pop.removethistomailme.net>
Source record: 47225

JLB wrote:
>
> I was hooking up an expensive GasFET LNA (20 GHz, 40 dB gain, 4 dB
> noise figure)the other day, so I could work on my noise figure
> algorithm. (Part of my job is to design signal processing algorithms
> for RF measurements on a computer.) Well, something wasn't working
> right so I went and checked the power supply. I had the leads
> reversed. Fortunately the amplifier has some sort of protection built
> in.

Doh! I did the same thing with an AD9854 evaluation board a couple of weeks ago. My usual habit of using a CV/CC power supply with the current limit cranked way down saved my bacon on that one. If I had left it at its 10-amp maximum setting, the $300 board (and probably the PC printer port it was connected to) would have been vaporized.

> Same thing applies to resistor colors. The good ole EIA colors they
> used back in the 60's and 70's I have no problem with, but the newer
> imported carbon films use different shades, and I always have to
> verify them with an ohmmeter.

I'm not color-blind at all, but those metal-film resistors with the blue bodies really give me fits. The red, orange, and brown bands, in particular, cannot be distinguished without an optical spectrum analyzer. What are the manufacturers thinking?

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

485. Re: Salvage Parts from a Microwave ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 02:31:03 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c4636e1.335258328@news.erols.com>
Source record: 47227

Yes, I was the guy with the old washer. (I do seem to be losing
all my major appliances lately). Thx. very much for the fast responses
to all who replied.

73 de Andrew/KG4JBM

Reticulum

Remove "your.hat" when replying via e-mail

486. Re: High Voltage Arcing???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 02:48:01 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <u4cerfhior8u90@corp.supernews.com>
Source record: 47228

how about a diagram and physical layout?
"Edward2001" <Edward2001@peoplepc.com> wrote in message
news:3C45E014.D8094A7E@peoplepc.com...
> We have a problem (when we are burning in some high voltage tubes), with
> the anode arcing over to the filament. The anode is being run at 60
> Kilovolts, with a current of 5 milliamps. The filament is being run by a
> transformer, through some relay contacts. The arcing plays havoc with
> the relay contacts, and some other circuitry. I would like to short out
> these high voltage spikes, before they get to the relay contacts. Would
> a varistor be capable of handling this kind of spike? Is there a better
> way to do this? Are all 300 watts, being fed back to the relay contacts,
> or is much of it being dissipated by the tube? Any help or input would
> be appreciated.
> Thanks in advance,
> Brian
>

487. Junkbox Surplus Additions

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 02:58:30 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <z%q18.543$vb1.97118@news1.iquest.net>
Source record: 47229
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

```
Junkbox Surplus Parts for Sale as of 01/15/2002
===============================================

Caps
====
NEW .1 uF Poly/Film caps - 10% 250v, new stock, paper tape, nice
long leads. These are not NPO and are made by S&M Components
50/$3.00 or 100/$5.00

NOS .01 uF ceramic caps, 10% 100v brand new by Kyocera
50/$3 or 100/$5

NOS 1000pf blue mono caps, 10% 100
50/$3 or 100/$5

NOS 470pf ceramics on paper tape, rated 5%
50/$3 or 100/$5

NOS 12pf NPO ceramics on tape
50/$4 or 100/$7

22uF 35v electrolytics These caps are on paper tape, NOS (New, but old
stock) made by Richey.
50/$2

Connectors
==========
I have NEW BNC chassis connectors for (includes nut and lock
washer) (I only have a few 100 left)

25 for $14.00
50 for $25.00

Voltage Regulators
==================
L7806CV voltage regulators. TO220 case. 5 for $4.00
LM7812T voltage regulators. TO220 case. 5 for $4.00

Key/Headphone Jacks
===================
These are 3.5mm female stereo PCB mount jacks. Can be used in
ugly/manhattan building projects with no problems.
3/$1.35 (or send a buck and a stamp)

Transistors
===========
TP2222 plastic TO92 NPN - NEW PARTS (House brand 2N2222) - 50/$4.50
```

100/$8.00
2N3906's plastic TO92. PNP - 50/$4.00 NEW PARTS
2N3704's plastic TO92, NPN - 50/$4.00 NEW PARTS
2N7000 MOSFET - 5/$2 10/$3.50

IRF540's TMOS Power FET, N-Channel, 27A, 100v RDS(on) = .070 Ohms
http://www.onsemi.com/pub/Collateral/IRF540-D.PDF for data sheet
$1.00 each.

BC847B - Surface Mount NPN's, general purpose
CBO = 50v, CEO = 45v, EBO = 6v, Collector Current Max = 100 mA,
electrical characteristic curves for this unit are the same as the
PN2222A, SST222A, MMST2222A, and UMT222A transistor. These are new
stock, on SM tape. 100pcs/$3.00 200pc/$5.00

Op AMPS, Comparators
====================

LM741CN - Single Op Amp, 8 Pin Dip, 4 for $1.50
http://www.hep.ph.ic.ac.uk/~hallg/Instrumentation/Data/LM741.pdf

BA4558 - Dual Op Amp, 8 Pin Dip, 4 for $1.50
http://www.rohm.com/products/databook/standard/pdf/ba4558.pdf

BA10324 - Quad Ground Sense Op Amp 14 pin, 4 for $1.50
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10358 - Dual Ground Sense Op Amp, 8 pin, 4 for $1.50
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10393 - Dual Comparator 8 pin dip, 4 for $1.50
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10339 - Quad Comparator 14 pin, 4 for $1.50
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA4560 - Dual High Slew Op Amp, 4 for $1.50
http://www.rohm.com/products/databook/standard/pdf/ba4560.pdf

Crystals
========
3.579545 Mhz Crystals for 80m - These are pulled colorburst crystals,
2/$1

POTS
====
10K 1 Turn Panel mount pots. These are pulls. No knobs, just
shafts. Most are Allen Bradley. Pot is about as big as a quarter.
With nut. 5/$4.00

Diodes
======
1N4148 - You always need these. 75 for $2.00 These are NEW.

Let me know if you're interested. All prices are post paid to the
USA, unless otherwise noted. I will ship to non USA addresses but we
need to discuss the shipping charges first.

Would anyone be interested in surface mount 2N3906's? Let me know.

--

==========
KB9BVN/QRP - New Whiteland IN - EM69WN
QRP-ARCI #10223 QRP-L #1540 FIST #5695
FISTS CC #764 - Proud Member ARRL
TEN TEC SCOUT @ 5W or NORCAL 40A @ 1.3W
INTO INFAMOUS AF4PS ATTIC DIPOLE
SOC #400 AND FLYING PIGS QRP #-57
==========

488. Re: High Voltage Arcing???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 03:40:51 UTC
From: Gary Glaenzer <nobulltrans@irtc.net>
Message-ID: <6Jr18.16$%k4.1703992@news2.randori.com>
Source record: 47231

specifics, bitte.....

"Edward2001" <Edward2001@peoplepc.com> wrote in message
news:3C45E014.D8094A7E@peoplepc.com...
> We have a problem (when we are burning in some high voltage tubes), with
> the anode arcing over to the filament. The anode is being run at 60
> Kilovolts, with a current of 5 milliamps. The filament is being run by a
> transformer, through some relay contacts. The arcing plays havoc with
> the relay contacts, and some other circuitry. I would like to short out
> these high voltage spikes, before they get to the relay contacts. Would
> a varistor be capable of handling this kind of spike? Is there a better
> way to do this? Are all 300 watts, being fed back to the relay contacts,
> or is much of it being dissipated by the tube? Any help or input would
> be appreciated.
> Thanks in advance,
> Brian
>
>

489. Re: Salvage Parts from a Microwave ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 03:42:09 UTC
From: deputy.dawg@cartoons.tv
Message-ID: <prhc4ucev3v6ehjd39b10smk6qoq6qt2pb@4ax.com>
Source record: 47230

Great 'fridge magnets in there.
73,
Jim

On Tue, 15 Jan 2002 23:29:42 GMT, Cathexis@yourhaterols.com
(Reticulum) wrote:

>Greetings,
>
> The family microwave burnt up today. Fire extinguished with standard
>ABC-type device. Looks like the magnetron burned through into the little plastic
>piece that covers it. Alas ! Any parts worth salvaging before I pitch it??
>
> Thx de KG4JBM
>
>
> Reticulum
>
>Remove "your.hat" when replying via e-mail

490. Re: 40metter antenna/tunner.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 04:00:00 UTC
From: Dan Tayloe <dtayloe@home.com>
Message-ID: <3C464C3F.1DD087B5@home.com>
Source record: 47232

I cannot help you much with the tuner, but it is likely that the SWR bridge you have (if it is the generic CB type) will not work at sub watt power levels. If you get a forward power reading at all, the reflected power level will look like you usually have a perfect match when in fact you simply do not have enough reflected RF voltage to get the diode to conduct!

Check out the resistive bridge LED based set up at http://www.extremezone.com/~nk7m/n7veswr.htm.

This bridge is capable of indicating down to 5 mW of reflected power. First peak your tuner for maximum receiver noise, then transmit and tune for the LED to go out. The resistive bridge configuration protects the transmitter finals also. Worst case load to the TX is 33 ohms (shorted antenna) to 100 ohms (open antenna).

For the simplest antenna/tuner combination, use a half wave wire (~66 ft for 40m), and use the tuner shown at:

http://www.qsl.net/w0ch/field_antenna.htm

This tuner is designed to match 1/2 wave, end fed antennas. An end fed, half wave antenna is a very effective QRP radiating system. It is very portable as well!

- Dan Tayloe, N7VE; Phoenix, Az; Az ScQRPions

Kc7eip wrote:
>
> Well i'm in the process of putting togeter one of the pixxie II Radio for
> the QRPp-i group and well i need to ad an antenna to the design for 40
> meters...The least expensive the better...To throw a big wrench in the
> project i do not have an antenna tunner... I do have a swr meter
> though..any suggestions...

491. DDS signal generators

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 05:01:16 UTC
From: wa0goz@arrl.net
Message-ID: <3C465A9C.7127@arrl.net>
Source record: 47233

Are there any "simple" DDS signal generator articles and schmatics around?

Thanks and 73

Henry WA0GOZ

492. MMIC based preamp for R2 receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 07:48:01 UTC
From: brocks@mailandnews.com
Message-ID: <674752f2.0201162348.752b79e8@posting.google.com>
Source record: 47234

I'm trying to patch together a home-brew HF rig. I want it to cover 80-20M. I was thinking of using a Mini-Circuit MAR-6 MMIC chip for the preamp for a KK7B R2 based receiver. I have heard the noise figure isn't great for this type of preamp.

Brock Schuler, VA6BTS

493. Re: MMIC based preamp for R2 receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 08:07:56 UTC
From: motsteve@mediaone.net
Message-ID: <motsteve-1701020310050001@dplane-176-88-250.pompano.net>
Source record: 47235

In article <674752f2.0201162348.752b79e8@posting.google.com>,
brocks@mailandnews.com (Brock Schuler) wrote:

> I'm trying to patch together a home-brew HF rig. I want it to cover
> 80-20M. I was thinking of using a Mini-Circuit MAR-6 MMIC chip for the
> preamp for a KK7B R2 based receiver. I have heard the noise figure
> isn't great for this type of preamp.
>
> Brock Schuler, VA6BTS

Hi Brock,

I don't know the exact NF of the mmic, but at the frequencies that you
are describing, I would guess that this would not be critical. There should
be formulae for the sensitivity in the handbooks and you can do a what-if on
Excel or with a simulator using various NF's also just to reassure yourself
that the part will work okay for you.

Good luck.

Steve WB4CZR

494. Re: MMIC based preamp for R2 receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 11:07:24 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <3C46B06C.C6FF208D@dialpoint.net>
Source record: 47236

The noise figure should be under 3 db looking at their specs. This is for a frequency of 500 mhz. For use under 30 mhz I wuld think it would be lower. Even if not it should be plenty low enough for use under 30 mhz. Look at their web site for the full specs. Think it is minicircuits.com

Brock Schuler wrote:
>
> I'm trying to patch together a home-brew HF rig. I want it to cover
> 80-20M. I was thinking of using a Mini-Circuit MAR-6 MMIC chip for the
> preamp for a KK7B R2 based receiver. I have heard the noise figure
> isn't great for this type of preamp.
>
> Brock Schuler, VA6BTS

495. Re: MMIC based preamp for R2 receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 11:32:50 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <89cd4ugb16g7bmcg5697s5adhhcuefupdk@4ax.com>
Source record: 47237

I don't think this is a good idea.

It's true that the noise figure for the MAR-6 is very good, I've measured one at 2.4 dB at 5 MHz. And, its really simple to build a preamp with the MAR series.

But--and it's a big but--the intermodulation and strong signal performance of the MAR-6 is not impressive. The quoted IP3 for the MAR-6 is +14.5 dBm (output) or -6.5 dBm (input). The one I built didn't perform as well as this. And, 20 dB is a lot of gain for a HF receiver, so concern for overloading the receiver is an issue.

Based on the quoted IP3, signals as strong (weak?) as -45 dBm at the antenna input will produce intermod products that are well above the noise level and quite noticeable in your receiver. For reference, I've seen signal levels around -15 dBm on my antennas from shortwave broadcast stations, or AM broadcast stations. And, even a quick and dirty breadboarded MAR-6 has significant gain into hundreds of MHz, so you might even get IM from FM broadcast or even TV stations. So, you are likely to find the bands become a sea of crud from intermodulation products.

If you are looking for a simple broadband preamplifier for the 3-30 MHz range, I would build one with a 2N5109. There's a complicated version of this at

http://www.qrp.pops.net/preamp.htm

but, simplified versions have been published by DeMaw in his books.

Another good low noise figure preamp with excellent IP3 figures can be made from a J310 FET running in grounded gate.

If you are really interested in a 2N5109 or J310 amp, e-mail me and I'll e-mail you a schematic and a photo or two of the ones I built for testing.

Jack Smith K8ZOA

On 16 Jan 2002 23:48:01 -0800, brocks@mailandnews.com (Brock Schuler) wrote:

>I'm trying to patch together a home-brew HF rig. I want it to cover
>80-20M. I was thinking of using a Mini-Circuit MAR-6 MMIC chip for the
>preamp for a KK7B R2 based receiver. I have heard the noise figure
>isn't great for this type of preamp.
>
>Brock Schuler, VA6BTS

496. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 13:40:04 UTC
From: Mike <m.j.willis@rl.ac.uk>
Message-ID: <a26k93$12t4@newton.cc.rl.ac.uk>
Source record: 47163

"JLB" <jim.bolinger@lintek.aeroflex.com> wrote in message
news:8d5ec8a2.0201160541.3955e074@posting.google.com...
> Slightly off topic, but I was curious if any other homebrewers or
> professionals have this pet peeve....

We all have our strengths and weaknesses and ought to choose a career that uses most of the strengths and is not hindered by the weaknesses. If I were colour blind I, would always check carefully the polarity by another means before applying power.

Red and green are colours that, to most people, are very different indeed. If you are colour blind, there are some tasks you should not attempt, one of which is visually checking colour coding the other is flying/driving at night.

497. Re: DDS signal generators

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 13:55:27 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c46d71b$0$4881@echo-01.iinet.net.au>
Source record: 47238

Take a look at

http://www.iinet.net.au/~richardh/VK6BRO.htm

Richard

<wa0goz@arrl.net> wrote in message news:3C465A9C.7127@arrl.net...
> Are there any "simple" DDS signal generator articles and schmatics
> around?
>
> Thanks and 73
>
> Henry WA0GOZ

498. Re: 160 meter antenna, need suggestions, limited space

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 14:03:25 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c46d8fb$0$4873@echo-01.iinet.net.au>
Source record: 47239

At resonance the antenna will obviously look like a pure resistance with inductive or capacitive reactance zero.
My point is that this resistance is made up of the resistance of the ground connection plus the radiation resitance of the antenna. For a short vertical this resistance is only a few ohms so that to get a feedpoint load resistance of 200 ohms you must have had a fairly high ground resistance unless you were using some sort of matching arrangement.

Richard

"Bill Janssen" <billj@ieee.org> wrote in message news:3C461561.C81E02B4@ieee.org...
> In my case the antenna was resonant at about 1.6 to 1.7 MHz. This gave
> inductive
> reactance at 1.8 MHz. the reactance was canceled using a capacitor.
>
> Bill K7NOM
>
> Richard Hosking wrote:
>
> > Unless you had a very tall vertical (say a couple of hundred feet), I
> > suspect most of the 200 ohms was ground resistance. With a typical short
> > vertical of 30 feet or so the radiation resistance would be a few ohms
(say
> > 5 _- I would have to look up the tables). Assuming the antenna was
loaded to
> > resonance and impedance matched correctly, this would give a radiation
> > efficiency of 5/200 or about 2.5% ie most of the power is lost in the
> > ground. Even with a quarter wave vertical (ie around 40 metres high) its
> > theoretical radiation resistance is only 35 ohms. Depending on the type
of
> > soil and other local factors, it takes a lot of copper in the ground to
get
> > a reasonably efficient ground connection.
> >
> > Richard
> >
> > "Bill Janssen" <billj@ieee.org> wrote in message
> > news:3C45A6B7.58BCDF37@ieee.org...
> > >
> > >
> > > Richard Hosking wrote:
> > >
> > > > We did 160M AM years ago in VK3
> > > > Most people used vertical antennas or a long wire which was

effectively
> > a
> > > > top loaded vertical antenna.
> > > > Ground wave radiation was better with the vertical in theory at
least.
> > In
> > > > practice it was difficult to get a half wave dipole far enough up to
get
> > it
> > > > operate properly. To get a radiation resistance approaching 50-70
ohms
> > you
> > > > have to get it a good half wave above ground.
> > > > The problem with a short vertical is that it has a very low
radiation
> > > > resistance in the order of a few ohms. The ground connection
typically
> > has a
> > > > resistance of 20-30 ohms for a large number of buried radials (say
20-30
> > 1/4
> > > > wave radials). This means the antenna efficiency is only 5-10% as
most
> > of
> > > > the power is dissipated in the ground resistance. You can increase
> > radiation
> > > > resistance by top loading the antenna (say a capacity hat) which
makes
> > it
> > > > look electrically longer at the feedpoint. This also makes the
current
> > > > distribution in the antenna more equal
> > > > The simplest scheme is to get the longest, highest wire up you can
and
> > feed
> > > > it against the best ground you can. You will have to probably step
50
> > ohms
> > > > down to a lower impedance, depending on ground resistance plus
radiation
> > > > resistance and load the antenna out to a quarter wave.
> > > > A good book on the subject is
> > > >
> > > > Low band DXing
> > > > by John Devoldere ON4UN
> > > >
> > > > Richard
> > >
> > > Good advice and I might add my experience. I had a vertical that
performed

> > > poorly
> > > and some kind soul advised that I should lower the resonant frequency
(
> > top
> > > loaded)
> > > and cancel the reactance at the feed point with a capacitor. That
raised
> > the
> > > feed point
> > > to 200 Ohms. I then used a transformer (tapped coil) to get 50 Ohms
for
> > the
> > > transmission
> > > line.
> > >
> > > The result was much better signal reports.
> > >
> > > Bill K7NOM
> > >
>

499. Re: 160 meter antenna, need suggestions, limited space

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 14:07:04 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c46d9d5$0$4871@echo-01.iinet.net.au>
Source record: 47240

Peter
Salt water obviously makes a very good ground connection and also acts as a
good reflector for radiation near the antenna. There was a series of
articles in Amateur Radio by John VK3ACA in the 70s which described the
issues of 160M antennas very well.
I am glad to hear 160M is still active over there.
Is VK3AML still on the air?

Richard

"Peter Parker" <parkerp@alphalink.com.au> wrote in message
news:3c46aee2@news.alphalink.com.au...
>
> "Richard Hosking" <zaprichardh@iinet.net.au(remove the zap)> wrote in
> message news:3c457976$0$1776@echo-01.iinet.net.au...
> > We did 160M AM years ago in VK3
>
> You'll be pleased that 160m AM in VK3 is still used .... including the
> 1.825 MHz 160m AM net (Sun - Fri) and the Saturday night 'missions'.
> There were also kite antenna transmissions last month on 160m AM.
>
> My own experiences are that a half-wavelength of wire (max height 12m up)
> over salt water works very well for medium distances (200 - 600km) and
> is quite good locally. For the radial I used about 20m of wire dropped
into
> the water. During one test, I was as strong as a 100w home stn in VK2, yet
> was only running 2.5w.
>
> Peter VK3YE
>
>

500. Re: High Voltage Arcing???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 15:30:15 UTC
From: Jerry Oxendine <joxendi@bellsouth.net>
Message-ID: <n5C18.60864$V55.3996420@e3500-atl1.usenetserver.com>
Source record: 47241

Not knowing what kind of circuit you are running this in, hard to tell, OM.
If it is a transmitter,
and the arcing is occurring when the key is released, you might try using a
dpdt relay and con-
necting the other side to ground. This is a wild guess and only comes with
some experiences I
had back in the AM days Probably way off base, but you don't supply enough
info.

Jerry
K4KWH

Edward2001 <Edward2001@peoplepc.com> wrote in message
news:3C45E014.D8094A7E@peoplepc.com...
> We have a problem (when we are burning in some high voltage tubes), with
> the anode arcing over to the filament. The anode is being run at 60
> Kilovolts, with a current of 5 milliamps. The filament is being run by a
> transformer, through some relay contacts. The arcing plays havoc with
> the relay contacts, and some other circuitry. I would like to short out
> these high voltage spikes, before they get to the relay contacts. Would
> a varistor be capable of handling this kind of spike? Is there a better
> way to do this? Are all 300 watts, being fed back to the relay contacts,
> or is much of it being dissipated by the tube? Any help or input would
> be appreciated.
> Thanks in advance,
> Brian
>

501. Re: 160 meter antenna, need suggestions, limited space

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 16:21:00 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3C46F9EB.BDB88214@ieee.org>
Source record: 47242

Richard Hosking wrote:

> At resonance the antenna will obviously look like a pure resistance with
> inductive or capacitive reactance zero.
> My point is that this resistance is made up of the resistance of the ground
> connection plus the radiation resitance of the antenna. For a short vertical
> this resistance is only a few ohms so that to get a feedpoint load
> resistance of 200 ohms you must have had a fairly high ground resistance
> unless you were using some sort of matching arrangement.
>
> Richard
>
> "Bill Janssen" <billj@ieee.org> wrote in message
> news:3C461561.C81E02B4@ieee.org...
> > In my case the antenna was resonant at about 1.6 to 1.7 MHz. This gave
> > inductive
> > reactance at 1.8 MHz. the reactance was canceled using a capacitor.
> >

The antenna was resonant at some lower frequency, not at 1.8 MHz. The feed
point was not at the low resistance point but was rather offset. It was like
feeding a dipole
at a point offset from the center. I agree that at the normal feed point, up the
tower a ways,
the feed empedance would be very low and resitive.

Bill K7NOM

502. Re: MMIC based preamp for R2 receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 16:28:53 UTC
From: "Harold E. Johnson" <W4ZCB@Home.com>
Message-ID: <9ZC18.57851$LQ1.17734941@news2.nash1.tn.home.com>
Source record: 47243

> I'm trying to patch together a home-brew HF rig. I want it to cover
> 80-20M. I was thinking of using a Mini-Circuit MAR-6 MMIC chip for the
> preamp for a KK7B R2 based receiver. I have heard the noise figure
> isn't great for this type of preamp.

You ought to be able to get 2.8 dB plus a couple for the front end IL of whatever filter you use. The 19 dB of gain will kill the overload protection that the R-2 has and provide you with a noise figure that is unuseable on 80 thru 20 unless you don't have anything better than a wet string for an antenna.

W4ZCB

503. Re: 40metter antenna/tunner.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 17:11:44 UTC
From: Kc7eip <kc7eip@shaw.ca>
Message-ID: <Xns91995CA63D18Ekc7eipshawca@24.64.223.211>
Source record: 47244

Dan Tayloe <dtayloe@home.com> wrote in news:3C464C3F.1DD087B5@home.com:

> http://www.qsl.net/w0ch/field_antenna.htm

I must say thanks...that is about the best answer i could have expected...
Not that i'd like to admit it but my design skill is not the best and the
link you provide had everything i could hope for.. Well I'm off to RS and
another local electronic store for parts and thanks again.

504. Re: Searching article abt SSB RX in QST June 41/April 1948

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 18:27:18 UTC
From: la8ak.xnd@online.no
Message-ID: <3c46216f.200904175@news.online.no>
Source record: 47245

On Wed, 16 Jan 2002 20:15:15 -0400, exray@coqui.net wrote:

>J M Noeding wrote:
>>
>> Searching the following article. Unfortunately I haven't QST CD for
>> this period, seems to be next choice...
>
>J-M,
>I think I have it here in the 1955 ARRL Handbook...uses 12AU7s as a
>product detector. I don't have a scanner but if no one else can provide
>the info, I can take a digital snapshot of that part of the ckt.
>
>-Bill WX4A
>
Thanks, but it isn't just any circuit I am after, I am interested in
the specific information given in those articles listed. I have the
CD's for QST 1950-59, 1970-74, 1990-94, Radcom 1964-69 and several
loose magazines of QST and CQ since 1947, and Radcom 1969-2002, but
not the issues listed, also have ARRL handbooks 1939, 1948, 1949,
1962, 1968, 1974, 1981, 1996

73
LA8AK

--
remove ,xnd to reply

505. Re: DDS signal generators

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 18:41:26 UTC
From: Kc7eip <kc7eip@shaw.ca>
Message-ID: <Xns91996BA78E997kc7eipshawca@24.64.223.211>
Source record: 47246

>

In the Jan issue of QST there was a fairly good article on DDS with parts list and schematic... also had sorce for circuit board and programed pic to controll dds chip...

506. Re: High Voltage Arcing???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 18:57:16 UTC
From: Edward2001 <Edward2001@peoplepc.com>
Message-ID: <3C471E8C.3DD90777@peoplepc.com>
Source record: 47156

There is a step-up transformer (for the anode) and a step-down transformer (for the filament).

The secondary of the step-up transformer has one lead that goes through a rectifier to the anode of two tubes. The other lead goes to ground.

The step-down transformer has a center tap that goes to ground (through a 4.7K resistor for a meter). The other two leads of the secondary, go to the two leads of the filament, through relay contacts (so we can select one of two different tubes).

The tubes are x-ray tubes, with just an anode and a filament. What we are doing is seasoning the tubes, for the first time. Sometimes, the anode will arc to the filament. Once in a while, when it arcs inside the tube, it will also arc from a connection to the relay contact, to ground. When this happens, it will burn a carbon trace to ground.

It is a very simple circuit, but with this one problem. Any ideas?

Brian

Edward2001 wrote:

> We have a problem (when we are burning in some high voltage tubes), with
> the anode arcing over to the filament. The anode is being run at 60
> Kilovolts, with a current of 5 milliamps. The filament is being run by a
> transformer, through some relay contacts. The arcing plays havoc with
> the relay contacts, and some other circuitry. I would like to short out
> these high voltage spikes, before they get to the relay contacts. Would
> a varistor be capable of handling this kind of spike? Is there a better
> way to do this? Are all 300 watts, being fed back to the relay contacts,
> or is much of it being dissipated by the tube? Any help or input would
> be appreciated.
> Thanks in advance,
> Brian

507. Re: DDS signal generators

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 19:25:37 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <a278fg$t6d$1@paris.btinternet.com>
Source record: 47147

<wa0goz@arrl.net> wrote in message news:3C465A9C.7127@arrl.net...
> Are there any "simple" DDS signal generator articles and schmatics
> around?
>
> Thanks and 73
>
> Henry WA0GOZ

I've got a very simple one driven by a PC printer port on my Geocities web
site.

--
Leon Heller, G1HSM leon_heller@hotmail.con
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

508. Homebrew Construction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 20:05:49 UTC
From: pentode <pentode@ntlworld.com>
Message-ID: <S6G18.36500$Hg7.3690286@news11-gui.server.ntli.net>
Source record: 47148
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.components,sci.electronics.design,sci.electronics.misc,uk.radio.amateur

If you are into homebrew radio/electronics construction,
you may find the following URL interesting:
www.copperisland.biz

509. Re: Homebrew Construction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 21:05:36 UTC
From: Lizard Blizzard <NOSPAM@rsccd.org>
Message-ID: <3C473CA0.D11B98D8@rsccd.org>
Source record: 47149
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.components,sci.electronics.design,sci.electronics.misc,uk.radio.amateur

ADVERTISEMENT!!

pentode wrote:
>
> If you are into homebrew radio/electronics construction,
> you may find the following URL interesting:
> www.copperisland.biz

510. Re: Homebrew Construction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 21:12:54 UTC
From: Ben <seabybs@hotmail.com>
Message-ID: <Z6H18.36816$Hg7.3713991@news11-gui.server.ntli.net>
Source record: 47151
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.components,sci.electronics.design,sci.electronics.misc,uk.radio.amateur

But quite a good idea all the same.

"Lizard Blizzard" <NOSPAM@rsccd.org> wrote in message
news:3C473CA0.D11B98D8@rsccd.org...
> ADVERTISEMENT!!
>
> pentode wrote:
> >
> > If you are into homebrew radio/electronics construction,
> > you may find the following URL interesting:
> > www.copperisland.biz

511. Re: MMIC based preamp for R2 receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 21:17:47 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <nd5e4ucbnoqe3k488otihkg773ootah3kb@4ax.com>
Source record: 47150

On Thu, 17 Jan 2002 11:32:50 GMT, Jack Smith <jsmith@mnsinc.com>
wrote:

>But--and it's a big but--the intermodulation and strong signal
>performance of the MAR-6 is not impressive. The quoted IP3 for the
>MAR-6 is +14.5 dBm (output) or -6.5 dBm (input). The one I built
>didn't perform as well as this. And, 20 dB is a lot of gain for a HF
>receiver, so concern for overloading the receiver is an issue.

I live 1-2 km from various UHF TV and FM transmission sites and nearby
cellular towers. When connecting a short test lead to the input of an
MAR-6 amplifier will make the output more or less useless on any
frequency, due to the huge number of spurious signals. If the MAR-6 is
to be used close to the antenna, quite a lot of selectivity is needed
in front of it (e.g. a tunable preselector). For HF applications, the
input filter must contain some low pass filtering above 30 MHz (with
chip capacitors) to avoid intermodulation products due to VHF/UHF
signals.

For HF applications MAV-11 might be a better choice, with a noise
figure of 3.8 dB (not a big deal with any resonant antenna on HF), the
output IP3 is 30 dBm (15 dB higher than on MAR-6). With 13 dB of gain
and +16 dBm 1 dB output compression point, thus the input compression
point is +3 dBm, compared to -20 dBm for MAR-6.

Paul OH3LWR

512. Re: Homebrew Construction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 22:27:52 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u4ek1j9ab97h71@corp.supernews.com>
Source record: 47152
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.components,sci.electronics.design,sci.electronics.misc,uk.radio.amateur

"Ben" <seabybs@hotmail.com> wrote in message
news:Z6H18.36816$Hg7.3713991@news11-gui.server.ntli.net...
> But quite a good idea all the same.

Not exactly unique to Duncan, tho. The basic technique was popularized by
Jim Kortge, K8IQY, a number of years ago, and the "Islander" nomenclature by
the New Jersey QRP Club a little more recently.

..

513. Re: 40metter antenna/tunner.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-17 23:51:15 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0201171551.205a81fb@posting.google.com>
Source record: 47153

Kc7eip <kc7eip@shaw.ca> wrote in message
news:<Xns91989C699DDEEkc7eipshawca@24.64.223.211>...
> Well i'm in the process of putting togeter one of the pixxie II Radio for
> the QRPp-i group and well i need to ad an antenna to the design for 40
> meters...The least expensive the better...To throw a big wrench in the
> project i do not have an antenna tunner... I do have a swr meter
> though..any suggestions...

You may have already bought parts, but myself, I would just use a
center fed 1/2 wave dipole fed with coax. This will be very efficient.
About as good as you can get really. Running qrp, you don't want or
need extra losses from a tuner. Using a 1/2 wave coax fed dipole, you
won't need one. Also you will vastly reduce the likelyhood of common
mode problems by using a center fed dipole rather than an end fed 1/2
wave. The center fed will work better in most cases. I bet 90%..And
the best part is it's very cheap. MK

514. See picture on my web

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 00:17:07 UTC
From: Zdravko <zdravko.francekovic@tel.hr>
Message-ID: <a27pbv$b105$1@as201.hinet.hr>
Source record: 47154

http:free-zg.hinet.hr//Frenki

515. Re: MMIC based preamp for R2 receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 00:40:46 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C476EBE.B23@pop.removethistomailme.net>
Source record: 47155

Brock Schuler wrote:
>
> I'm trying to patch together a home-brew HF rig. I want it to cover
> 80-20M. I was thinking of using a Mini-Circuit MAR-6 MMIC chip for the
> preamp for a KK7B R2 based receiver. I have heard the noise figure
> isn't great for this type of preamp.
>
> Brock Schuler, VA6BTS

Jack and Paul are right on the money... forget the MAR-6 for HF use.
The noise figure is no problem, but you don't need 20 dB of gain in
front of the R2 or any other HF receiver. The IMD will cook your goose.

What kind of antenna are you trying to use, and why are you thinking you
need a preamp? The MAV-11 may be a better choice, but if you're trying
to work with an electrically-short antenna, you'll be better off with an
impedance-matching solution like the preamp at
http://www.amrad.org/projects/lf/actant/. Don't mess with the pricy
Crystalonics JFET they recommend... just use an ordinary J310 and run it
on 12 volts. This will work better than any 50-ohm MMIC with a small
antenna.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

516. Re: MMIC based preamp for R2 receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 00:48:44 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <qbre4u0cjkmdtnilo89t9jte8rnqrkuuud@4ax.com>
Source record: 47158

>
>For HF applications MAV-11 might be a better choice, with a noise
>figure of 3.8 dB (not a big deal with any resonant antenna on HF), the
>output IP3 is 30 dBm (15 dB higher than on MAR-6). With 13 dB of gain
>and +16 dBm 1 dB output compression point, thus the input compression
>point is +3 dBm, compared to -20 dBm for MAR-6.
>
>Paul OH3LWR

Paul:

Yes, good points! A MAV-11 would be better. But, you can reach an input IP3 of +33 dBm with 10 dB gain and around 6 dB NF with a 2N5109. If you want to do the "noiseless feedback" trick, you can drop the NF down to the sub-3 dB range, but you have to wind a somewhat complicated transformer. For most HF use, IP3 is much more important than NF.

The MAR series amps are great for many applications, but putting one in the front end of an HF receiver in normal circumstances doesn't strike me as a good idea. The effort you would have to put into filtering would cancel the simplicity of the MAR amplifier approach. Even if you filter out the AM, TV and FM broadcast, how do you filter out the SW broadcast? Even here in on the east coast of the US, it isn't uncommon to see 6 or 7 MHz SW signals in the -15 dBm range at night, if you have a good antenna. I've seen spectrum analyzer plots from Europe that show SW broadcast signals in the 0 dBm and stronger range!

I put my HP 4300 broadband (flat to 20 MHz) true RMS meter onto my log periodic antenna a few weeks ago to see what the total signal intake might be in a receiver front end. I put a 50 ohm termination on the 4300. During the daytime, I was seeing a reasonably steady -20 dBm, with peaks around -15 dBm. (Antenna is a log periodic 7 MHz and 10-30 MHz, at 30 meters above ground, pointed north east from a location near Washington DC.)

Jack K8ZOA

517. Re: MMIC based preamp for R2 receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 01:00:18 UTC
From: motsteve@mediaone.net
Message-ID: <motsteve-1701022002290001@dplane-176-88-250.pompano.net>
Source record: 47157

In article <89cd4ugb16g7bmcg5697s5adhhcuefupdk@4ax.com>, Jack Smith
<jsmith@mnsinc.com> wrote:

> I don't think this is a good idea.
>
> It's true that the noise figure for the MAR-6 is very good, I've
> measured one at 2.4 dB at 5 MHz. And, its really simple to build a
> preamp with the MAR series.
>
> But--and it's a big but--the intermodulation and strong signal
> performance of the MAR-6 is not impressive. The quoted IP3 for the
> MAR-6 is +14.5 dBm (output) or -6.5 dBm (input). The one I built
> didn't perform as well as this. And, 20 dB is a lot of gain for a HF
> receiver, so concern for overloading the receiver is an issue.
>
> Based on the quoted IP3, signals as strong (weak?) as -45 dBm at the
> antenna input will produce intermod products that are well above the
> noise level and quite noticeable in your receiver. For reference, I've
> seen signal levels around -15 dBm on my antennas from shortwave
> broadcast stations, or AM broadcast stations. And, even a quick and
> dirty breadboarded MAR-6 has significant gain into hundreds of MHz, so
> you might even get IM from FM broadcast or even TV stations. So, you
> are likely to find the bands become a sea of crud from intermodulation
> products.
>
> If you are looking for a simple broadband preamplifier for the 3-30
> MHz range, I would build one with a 2N5109. There's a complicated
> version of this at
>
> http://www.qrp.pops.net/preamp.htm
>
> but, simplified versions have been published by DeMaw in his books.
>
> Another good low noise figure preamp with excellent IP3 figures can be
> made from a J310 FET running in grounded gate.
>
> If you are really interested in a 2N5109 or J310 amp, e-mail me and
> I'll e-mail you a schematic and a photo or two of the ones I built for
> testing.
>
> Jack Smith K8ZOA
>
>
>

> On 16 Jan 2002 23:48:01 -0800, brocks@mailandnews.com (Brock Schuler)
> wrote:
>
> >I'm trying to patch together a home-brew HF rig. I want it to cover
> >80-20M. I was thinking of using a Mini-Circuit MAR-6 MMIC chip for the
> >preamp for a KK7B R2 based receiver. I have heard the noise figure
> >isn't great for this type of preamp.
> >
> >Brock Schuler, VA6BTS

I agree with Jack. The most important thing would be the IM, etc due to out of band signals. Your best design would include some healthy front end protestion in the form of a preselector if possible. At least a good band pass filter with a 50db stopband or higher outside the band of interest. This is highly desired if you have metropolitan broadcasters right on your QTH.

Does anyone out there remember the 40mtr preselectors in QST which were made using galvinized garbage cans? Now, that is front end protection! :-)

BTW, I think I'm getting too old, as everyone else thinks that I'm pulling their rip cord with my memories of past projects in the mags. Oh well! Sooner or later I'll be a silent key in 12AX7A/6L6 heaven. :-)

Steve
WB4CZR
Plantation, FL

Did the CK722 or 2N107 ever exist or was I dreaming of secondary electrons?
E X H is poynting up!

518. Re: MMIC based preamp for R2 receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 03:59:04 UTC
From: Michael Black <blackm00@cam.org>
Message-ID: <Pine.LNX.4.20.0201172250010.30818-100000@darkstar.example.net>
Source record: 47159

On Fri, 18 Jan 2002, carltons wrote:

>
> Does anyone out there remember the 40mtr preselectors in QST which were made
> using galvinized garbage cans? Now, that is front end protection! :-)
>
> BTW, I think I'm getting too old, as everyone else thinks that I'm pulling
> their rip cord with my memories of past projects in the mags. Oh well!
> Sooner or later I'll be a silent key in 12AX7A/6L6 heaven. :-)
>
I can't quite place a 40M filter in a garbage can.

On the cover of QST for June 1972, there was a 2 metre filter made out
of a garbage can. Partly it was a joke, but it did work fine. They
even talked about cooking hotdogs inside the cavity.

Within a few years, there was an article in QST about large helical
filters for the HF bands, but I don't remember any garbage cans in
that article.

Some guy did describe a 10M cavity made out of an oil drum in 73
around 1969 or 70. He had some cockamamey (did I spell that right?)
new modulation scheme, and he wanted to strip off a sideband, so he
built a filter with the oil drum (or maybe it was more than one).

If you could provide a time period when you remember seeing such an
article, it might help.

Michael VE2BVW

519. Re: See picture on my web

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 04:25:57 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <u4f8utghu4loc0@corp.supernews.com>
Source record: 47160

where aare the "ice shields"?
great picture otherwise..
thanks for sharing
hank wd5jfr
"Zdravko" <zdravko.francekovic@tel.hr> wrote in message
news:a27pbv$b105$1@as201.hinet.hr...
> http:free-zg.hinet.hr//Frenki
>
>

520. Re: MMIC based preamp for R2 receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 06:15:42 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <i4P18.107732$fe1.1703020@bgtnsc06-news.ops.worldnet.att.net>
Source record: 47161

Hewlett-Packard has their newest version of AppCad on their website. It will do cascaded noise figure calculations, as well as many other cool things. The url is www.hp.woodshot.com. This will take you to the download page for AppCad, version 2.5.

Pete KE9OA

carltons <motsteve@mediaone.net> wrote in message news:motsteve-1701020310050001@dplane-176-88-250.pompano.net...
> In article <674752f2.0201162348.752b79e8@posting.google.com>,
> brocks@mailandnews.com (Brock Schuler) wrote:
>
> > I'm trying to patch together a home-brew HF rig. I want it to cover
> > 80-20M. I was thinking of using a Mini-Circuit MAR-6 MMIC chip for the
> > preamp for a KK7B R2 based receiver. I have heard the noise figure
> > isn't great for this type of preamp.
> >
> > Brock Schuler, VA6BTS
>
>
>
> Hi Brock,
>
> I don't know the exact NF of the mmic, but at the frequencies that you
> are describing, I would guess that this would not be critical. There
should
> be formulae for the sensitivity in the handbooks and you can do a what-if
on
> Excel or with a simulator using various NF's also just to reassure
yourself
> that the part will work okay for you.
>
> Good luck.
>
>
> Steve WB4CZR

521. wanted LT2S

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 07:49:32 UTC
From: iw1arb <iw1arb@hotmail.com>
Message-ID: <a28k21$i38$1@serv1.iunet.it>
Source record: 47162

[No readable article body recovered]

522. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 11:44:34 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C480AA2.6BA077D1@eznec.com>
Source record: 47164

I have a good friend who has red-green color blindness and is one of the very best engineers I know. He has some trouble with resistors, but usually manages with 5% values at least if different brands or types aren't mixed. Because of the limited number of possible combinations, there are only a few that are ambiguous, once he gets used to the colors on a particular brand. But he always has to be aware of his handicap, and keeps a meter handy. And he needs to have, and gets, some help when connecting color coded wires or other colored components.

Of the several people with red-green color blindness I know, none have trouble with traffic lights -- they're bright and different enough to distinguish. One friend who flies, though, took a test with light guns to try and get permission to fly at night. He thought he had done pretty well -- until the results came back. He did worse than random guessing by a statistically significant margin.

A young man I know found that because of his color blindness, the only job available to him if he were to join the military was infantry. This I can understand, because of the ubiquitousness of color coding in everything from medicine to hydraulic lines to electrical components, and the necessity of troops to be able to function effectively in much less than idea circumstances. But as my engineer friend has shown, it can be an almost insignificant handicap in electronics if you accept the limitation and learn to deal with it.

Roy Lewallen, W7EL

Mike wrote:
>
> "JLB" <jim.bolinger@lintek.aeroflex.com> wrote in message
> news:8d5ec8a2.0201160541.3955e074@posting.google.com...
> > Slightly off topic, but I was curious if any other homebrewers or
> > professionals have this pet peeve....
>
> We all have our strengths and weaknesses and ought to choose a career that
> uses most of the strengths and is not hindered by the weaknesses. If I were
> colour blind I, would always check carefully the polarity by another means
> before applying power.
>
> Red and green are colours that, to most people, are very different indeed.
> If you are colour blind, there are some tasks you should not attempt, one of
> which is visually checking colour coding the other is flying/driving at
> night.

523. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 13:30:00 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <8h8g4usi1tjv9h4ol5p75ai3r80cpo53r5@4ax.com>
Source record: 47166

On Fri, 18 Jan 2002 03:44:34 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>Of the several people with red-green color blindness I know, none have
>trouble with traffic lights -- they're bright and different enough to
>distinguish. One friend who flies, though, took a test with light guns
>to try and get permission to fly at night. He thought he had done pretty
>well -- until the results came back. He did worse than random guessing
>by a statistically significant margin.

The really sad thing is that light guns in tower controlled airports
are almost never used. In an era when battery powered hand-held
aviation radios are inexpensive additions to most pilot's flight bags
this requirement is like asking someone to demonstrate how to saddle
up a horse to drive a car.

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

524. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 13:30:43 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0201180530.76d49bbc@posting.google.com>
Source record: 47165

Roy Lewallen <w7el@eznec.com> wrote in message news:<3C480AA2.6BA077D1@eznec.com>...
> I have a good friend who has red-green color blindness and is one of the
> very best engineers I know. He has some trouble with resistors, but
> usually manages with 5% values at least if different brands or types
> aren't mixed. Because of the limited number of possible combinations,
> there are only a few that are ambiguous, once he gets used to the colors
> on a particular brand. But he always has to be aware of his handicap,
> and keeps a meter handy. And he needs to have, and gets, some help when
> connecting color coded wires or other colored components.
>
> Of the several people with red-green color blindness I know, none have
> trouble with traffic lights -- they're bright and different enough to
> distinguish. One friend who flies, though, took a test with light guns
> to try and get permission to fly at night. He thought he had done pretty
> well -- until the results came back. He did worse than random guessing
> by a statistically significant margin.
>
> A young man I know found that because of his color blindness, the only
> job available to him if he were to join the military was infantry. This
> I can understand, because of the ubiquitousness of color coding in
> everything from medicine to hydraulic lines to electrical components,
> and the necessity of troops to be able to function effectively in much
> less than idea circumstances. But as my engineer friend has shown, it
> can be an almost insignificant handicap in electronics if you accept the
> limitation and learn to deal with it.
>
> Roy Lewallen, W7EL
>

Thanks for standing up for us color blind engineers and private
pilots, Roy!

I was in Air Force ROTC as an undergrad, but decided that if they
would not let me be a pilot I didn't want in. (Besides, my draft
number was 362!)

As I said, the old carbon comp resistors with the EIA pigments are no
problem.

I have always wanted to be an engineer. My license plate is N8EE, and
someone once asked me if it meant 'inate engineer'---which is true. I
have never really had very many problems---I just have to be careful.

I have had night training for my pilots license, but after I
'graduated' they clamped down on it. Went and took the color light
test like your friend and the same thing happened---worse than random.

They said I would be wasting my money if I tried again.

Being an engineer/scientist I do find things that are fun and amusing every now and then. I once had a translucent toothbrush that changed colors denpending on if I looked thru it thickwise or thinwise.

Jim
N8EE

525. Re: 40metter antenna/tunner.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 14:10:57 UTC
From: Kc7eip <kc7eip@shaw.ca>
Message-ID: <Xns919A3E5FABFA3kc7eipshawca@24.64.223.211>
Source record: 47167

nm5k@wt.net (Mark Keith) wrote in
news:25eb70d7.0201171551.205a81fb@posting.google.com:
> You may have already bought parts, but myself, I would just use a
> center fed 1/2 wave dipole fed with coax. This will be very efficient.
> About as good as you can get really. Running qrp, you don't want or
> need extra losses from a tuner. Using a 1/2 wave coax fed dipole, you
> won't need one. Also you will vastly reduce the likelyhood of common
> mode problems by using a center fed dipole rather than an end fed 1/2
> wave. The center fed will work better in most cases. I bet 90%..And
> the best part is it's very cheap. MK

No i guess i was lucky enough to call the store ahead of time and fined
they were out of toroids so i decieded to wait on the parts... in the i
guess i am lucky... as far as centerfed halfwave dipole how i saw some
articles on that as well but the required a specific length and type of
coax to get a good match... any ideas on the length and type i would need
for 40 meters?

526. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 14:37:27 UTC
From: ok1sip@atlas.cz
Message-ID: <8f3e93b5.0201180637.6526022e@posting.google.com>
Source record: 47168

> I sometimes cannot read brown from red on a resistor, and it was only a
> little while ago that I realized all 1% resistors have a brown band for
> the tolerance...

Hi all,
fortunately, I distinguish colors very well, according to tests better than average. Nevertheless, I sometimes have problems with colour coded resistors. Why ? Due to different background of the coding. I have seen resistors painted gray, light brown, dark red-brown, light blue, dark green and maybe more. All colour-coded, of course. But the perception of the same colour over different backgrounds differs, even when the eyes are in perfect condition. My advice ? Always have your multimeter ready !

BR from Ivan

527. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 15:28:01 UTC
From: troglodite@aol.com
Message-ID: <20020118102801.05502.00003394@mb-mq.aol.com>
Source record: 47169

I'm red/green deficient, and have always had trouble telling a 1000 ohm resistor from a 1 megohm, and so on. Sometimes I can tell, but I usually don't take the chance, and check it with a meter. On those little 1/10 watt resistors, it's impossible, at least for me.

The classic "book" used for testing color blindness was quite an eye opener for me, I couldn't see ANY numbers beyond the first page. However, there is a "trick" to traffic lights. The red light is always on the top for vertically mounted lights, and on the left for horizontal mounted.

528. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 15:40:32 UTC
From: kenneth m cubilo <kce@freeway.net>
Message-ID: <3c4841f1$0$35614$2c3e98f8@news.voyager.net>
Source record: 47170

well i have been totally color blind since the age of 7. through the
years
i have learned to work with colors via shades of gray, the small color
bands on resistors do cause some problems so i am forced to use a
ohmmeter on these other wise if the colors are bright such as hook up
wire i have no problems, however i can only tell the basic colors, for
me their is no sky-blue or ocean blue its blue period via the shade i
see.
the real plus to this condition for me is the ability in my present job
to work in light levels where most other wire men are blind and need
lots of light.I guess every cloud has a silver lining. the reason i lost
my color vision was due to looking at a solar event back in the early
60's without proper protection. just in case anyone wants to know, no i
cannot watch a b/w tv and tell you the colors does not work that way.
I also was able to fool the doctors at the military induction center
into thinking i could see colors.
73 ken w8ob

--
SUPPORT RADIO TELEGRAPH THE VOICE OF PROFESSIONAL RADIO OPS.!!!
Member of FISTS #7242 QCWA #30270 SOWP # 5648-M QRPARCI AND OTHERS

529. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 16:01:14 UTC
From: Marty <nfn04028@naples.net>
Message-ID: <eFX18.4615$X4.385127@newsread2.prod.itd.earthlink.net>
Source record: 47171

Do those red and green turn arrows present any problem? Just curious.
They're often hung up all by themselves.

>
> The classic "book" used for testing color blindness was quite an eye
opener for
> me, I couldn't see ANY numbers beyond the first page. However, there is a
> "trick" to traffic lights. The red light is always on the top for
vertically
> mounted lights, and on the left for horizontal mounted.
>
>

530. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 16:11:25 UTC
From: mikea@mikea.ath.cx
Message-ID: <NOX18.5592$TF6.970765529@newssvr16.news.prodigy.com>
Source record: 47172

Marty <nfn04028@naples.net> wrote:

: Do those red and green turn arrows present any problem? Just curious.
: They're often hung up all by themselves.

:> The classic "book" used for testing color blindness was quite an eye
: opener for
:> me, I couldn't see ANY numbers beyond the first page. However, there is a
:> "trick" to traffic lights. The red light is always on the top for
: vertically
:> mounted lights, and on the left for horizontal mounted.

Even when they're hung all by themselves, the standard is
red on top (vertical) or on the left (horizontal).

One of the good things about working for a state highway department
is that one gets copies of various standards books.

--
Spamming because of serious financial problems is like
yodeling because your cat destroys your furniture.
-- Gary S. Callison, in nanae

531. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 17:03:27 UTC
From: Mike <m.j.willis@rl.ac.uk>
Message-ID: <a29khc$3imo@newton.cc.rl.ac.uk>
Source record: 47173

> The classic "book" used for testing color blindness was quite an eye opener for
> me, I couldn't see ANY numbers beyond the first page. However, there is a
> "trick" to traffic lights. The red light is always on the top for vertically
> mounted lights, and on the left for horizontal mounted.
>
That was the point, at night, you don't know what is top or left. They ought to flash them or something.

As for the book, it is interesting, there are some pages where you can see more than one number if you look carefully. Is there an electronic version available anywhere?

Also, while on the subject of colour vision. Does everyone have the same spectral range? I.e. Where does red stop being red and become infra-red and is it the same for everyone?

532. Re: Homebrew Construction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 18:23:07 UTC
From: k7itm@aol.com
Message-ID: <3200347.0201181023.32f89262@posting.google.com>
Source record: 47174
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.components,sci.electronics.design,sci.electronics.misc,uk.radio.amateur

"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:<u4ek1j9ab97h71@corp.supernews.com>...
> "Ben" <seabybs@hotmail.com> wrote in message
> news:Z6H18.36816$Hg7.3713991@news11-gui.server.ntli.net...
> > But quite a good idea all the same.
>
> Not exactly unique to Duncan, tho. The basic technique was popularized by
> Jim Kortge, K8IQY, a number of years ago, and the "Islander" nomenclature by
> the New Jersey QRP Club a little more recently.
>
> ..
I wonder how old the idea is. I had a friend who used it about 30
years ago, but it may be quite a bit older than that. (I find it
faster to just fab a board...if it's a quick job, I'll toss down the
traces that are obvious and do the rest with wire. Also lets me
handle a much wider range of components.)

Cheers,
Tom

533. ARNewsline 1275 - Jan 18 2002

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 18:41:06 UTC
From: radionews@aol.com
Message-ID: <20020118134106.25519.00003275@mb-fc.aol.com>
Source record: 47175

AMATEUR RADIO NEWSLINE(tm) REPORT #1275 - January 18 2002

Amateur Radio Newsline report number 1275 with a release date of
Friday, January 18th 2002 to follow in 5-4-3-2-1.

The following is a Q-S-T. A new ham antenna on the I-S-S and a new microwave record down-under are first on Amateur Radio Newsline report number 1275 coming your way right now!

(Billboard Cart Here)

**

HAM RADIO IN SPACE: NEW ANTENNAS INSTALLED ON THE ISS

An American astronaut and a Russian cosmonaut ventured into space on Monday January 14th to move a construction crane and install a new set of ham radio antennas on the International Space Station. Roy Neal, K6DUE, has the details.

--

THERE IT WAS, ON NASA TELEVISION, TWO WHITE SPACE SUITED CHARACTERS, DWARFED BY THE IMMENSITY OF THE INTERNATIONAL SPACE STATION. FOR THE 32ND TIME ASTRONAUTS AND COSMONAUTS WERE OUTSIDE THE HUGE SPACECRAFT TO ASSEMBLE HARDWARE.

THEIR PRIMARY OBJECTIVE WAS TO MOVE A BIG CARGO CRANE FROM ITS TEMPORARY BERTH ON THE UNITED STATES SIDE OF THE ORBITING OUTPOST TO A PERMANENT LOCATION OUTSIDE THE DOCKING COMPARTMENT OF THE RUSSIAN CONTROL MODULE.

THAT ACCOMPLISHED, THEY WENT ON TO UNFURL A HAM RADIO ANTENNA. ASTRONAUT CARL WALTZ, KC5TIE AND COSMONAUT YURI ONUFRIENKO, RK3DUO, DEPLOYED THE RIBBON OF TAPE THAT SOON WILL BE IN USE ON A HAM RADIO STATION IN THE SERVICE MODULE,. WHERE THE CREWS LIVE AND SLEEP. A SECOND STATION HAS BEEN IN SERVICE FOR SOME TIME INSIDE THE SO CALLED FUNCTIONAL CARGO BLOCK, ANOTHER SECTION OF THE I S S.

FRANK BAUER, KA3HDO, THE CHAIRMAN OF ARISS, THE GROUP THAT IS RESPONSIBLE FOR AMATEUR RADIO ON THE SPACE STATION, CONGRATULATED THE INTERNATIONAL TEAM OF LICENSED HAMS FOR THE SUCCESSFUL CONCLUSION TO MONTHS OF HARD WORK.

ON JANUARY 25th ONUFRIENKO IS SCHEDULED TO GO OUTSIDE AGAIN, WITH FLIGHT ENGINEER DAN BURSCH, KD5PNU, TO INSTALL 3 MORE HAM RADIO ANTENNAS OUTSIDE THE MODULE THEY CALL ZVEZDA, THE CREW COMPARTMENT THAT'S THE SIZE OF A PASSENGER BUS HERE ON EARTH.

HAM RADIO IS GROWING RAPIDLY IN SPACE, ALONG WITH THE INTERNATIONAL STATION ON WHICH IT'S INSTALLED.

FOR THE AMATEUR RADIO NEWSLINE, ROY NEAL, K6DUE

--

The Expedition 4 crew will remain on board the ISS until May. And according to Frank Bauer, KA3HDO, another important task is to bring the automatic packet system back on line. He says that ground technicians are working with the astronauts and cosmonaut on that project and that task will continue as crew time permits. (ARNewsline from information provided by ARISS, NASA.)

**

HAM RADIO RECORDS: 24 GHZ DOWN-UNDER

A new distance record is set on a band where even commercial interests are only now starting to tread. And its a group of Australian hams who have set it. Q-News Graham Kemp, VK4BB, has the details:

--

A new Queensland distance record on 24.048.1 GHz USB was established morning of Tuesday 08 January over a 72.8 Km path. Location 1 was at Wellington Point, with VK3ZQB and VK4ZHL portable. Location 2 was at Caloundra, with VK3XPD and VK5DK portable operating.

Signals strengths up to 5x5 after initial optimization with typical daytime QSB. The visiting team are continuing with local propagation experiments. The challenges of building and operating microwave amateur radio equipment are wonderfully rewarding in many ways!

From Q-News Australia, I’m Graham Kemp, VK4BB, for the Amateur Radio Newsline.

--

Further experimentation is expected to bring even more record setting contacts in this very microwave ham radio band. (Q-News)

**

RESTRUCTURING: BIG LICENSING SUCCESS IN THE UK

A new slow-code license recently introduced in the United Kingdom is also setting records. This in the area of people flocking to get it. Jeramy Boot, G4NJH, days that the new British Foundation License is on its way to becoming a major success:

--

The Radio Licensing Center reports that, as of the 7th of January, exactly 600 of the new M3 Foundation Licenses had been issued.

In the 'QSO Party' for Foundation Licensees that took place on the 1st of January it is estimated that about 100 M3 stations were active. Many joined the one-minute-past-midnight 80-meter net and many more were heard working DX during the subsequent days.

One person active on the 1st of January was Mike Marsden, M3BQH, who also holds the callsign G8BQH. Mike reports that he worked Alex, UR5EDU, in the Ukraine at

two seconds past midnight, using 10 watts on 40 meters. The report was 59+10dB. After a few hours' sleep M3BQH worked 66 stations on the first day, with only two short CQ calls.

"The pile-up queue was never ending, I even managed to work seven other M3s", Mike said.

Jeramy Boot, G4NJH

--

To put this in perspective. The UK has 57,814 hams so 600 is about 1%. Here in the United States we have close to 625,000 licensees. That’s the equivalent of getting 6250 hams signing up for a new license class here in the USA in only a few short days. (GB2RS)

**

BREAK 1

This is ham radio news coming to you from the United States of America. We are the Amateur Radio Newsline, including the W8GK repeater serving Charleston West Virginia.

(5 Sec Pause Here)

**

RADIO REGULATIONS: FCC'S APPROVES DRAFT WRC PROPOSALS

The FCC’s Advisory Committee for the year 2003 World Radiocommunications Conference has approved its preliminary draft proposals. The document has been assigned as D-A-02-101 and deals mainly with satellite and terrestrial allocations in the UHF and microwave bands. Amateur Radio is only briefly mentioned in the area of 890 to 1350 MHz allocations.

The Advisory Committee itself was formed in January of 2001 to assist in the development of United States proposals for WRC 2003. DA-02-101 is based primarily on the committee report. Comments on it are due on it no later than January 28th.

The complete of 55 page text of DA-02-101 is on the FCC website at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-02-101A1.txt (FCC)

**

ENFORCEMENT: CLEAN UP THE INTERFERENCE - PLEASE

The FCC has written to an A-M radio station and an electric power provider to help resolve an unusual and long-standing interference situation. One affecting local amateurs in the Cincinnati and Mason Ohio areas. Amateur Radio Newsline’s Don Wilbanks, KC5MFA, brings us up to date:

--

The letter suggests that multiple sources may be involved in this interference case. Also that two that are possibilities are Cinergy Corporation and radio station WLW. Cinergy is the electric company to the affected area and WLW is a Clear Channel Communications owned power-house AM station serving the greater Cincinnati area from a transmitter in Mason.

WLW operates on 700 kHz with 50,000 Watts into a single element diamond shaped half-wave vertical tower. This is only one of two such towers left in the United States, the other belonging to WSM AM in Nashville Tennessee. Both were constructed in the early 1930's by the now defunct Blaw Knox Construction Corporation.

One of the amateurs affected is Bob Reiff, WA8ULW, of Mason. Reiff told the ARRL Letter that while the noise is most noticeable on 160 meters, it's showing up elsewhere. He says that some local hams suspect it is even causing problems even on a two meter repeater.

In its letters, the Commission says that it recognizes this to be an unusual case. It says that the source of the interference could turn out to be something else unexpected. But the Commission adds that it is turning to the radio station and electric utility company and asking for their help in finding the source of the noise plaguing the Mason ham community. It's also asking that both cooperate with the technical experts from the American Radio Relay League in solving the problem.

For the Amateur Radio Newsline, I'm Don Wilbanks, KC5MFA.

--

By the way, More information on this very interesting Blaw Knox diamond tower design and the ones installed at both WLW and WSM is available on-line. Simply take your browser to http://www.wsmonline.com/w_homepage/tower/index.html. Its very interesting reading. (FCC, ARRL, Amateur News Weekly)

**

ENFORCEMENT: UNLICENSED OPERATOR TOLD TO EXPLAIN

A former ham that the FCC says may have been on the air without a license has been asked by the agency to provide an explanation. The person posing the questions is FCC chief ham radio rules enforcer Riley Hollingsworth, K4ZDH. And in a recent Rain Enforcement log, Hollingsworth outlined the situation:

--
Hollingsworth: "We requested clarifying information from Brian Bailey, ex-KD5PXQ. His license was set aside by the Wireless Bureau on October 19th. We want to know his exact whereabouts on two specific days in September. Bailey has been in touch with us and is deciding weather to provide the information."
--

According to Hollingsworth, the information that the FCC wants from Bailey relates to allegations of unlicensed operations and malicious interference. (FCC, RAIN)

**

HELPING HAMS: HAMDIHAMS NEW E-MAIL ADDRESS

This note: The Courage HandiHam System has a new electronic mail address. You can now reach the group at handiham@courage.org. You may also contact its Director Pat Tice directly at wa0tda@arrl.net. (HandiHams)

**

CONVENTIONS: HAMVENTION SAYS BRING YOUR BUS AND LAVE THE PARKING SPOT TO US

Free parking at the HARA Arena for Hamvention? Well, kind of. Its free if you leave your car at home and charter a bus to bring in a pretty large group of people to the event. Amateur News Weekly's Phil Thomas, W8RMJ has the not so complex details:

--

For Amateurs who charter a bust to make the annual journey to Hamvention, the Dayton Hamvention Committee will reserve a parking place for your chartered bus for the entire three days of Hamvention. The reserved parking will be close to the HARA Arena Complex, allowing not only a place to secure your valued purchases, but also a place to rest those weary feet after walking many, many miles of Hamvention. Space is limited for the new charter bus parking area. Pre registration is required. Availability is on a first come, first served basis.

--

For more information on the new on-site charter bus parking offer or to reserve a space, please contact the Dayton Hamvention office. It's open normal business hours Eastern Standard Time at are code (937) 276-6930. You can also fax your request toll free at
1-800-491-4267. (Amateur News Weekly)

**

CONFERENCES: SE VHF SOCIETY IN APRIL

Greg Robinson KB4NVD says over the VHF Reflector that the Sixth Annual Southeastern VHF Society Conference will take place April 26th through the 27 Th. in Oak Ridge, Tennessee. The conference, hosted by the Southeastern VHF Society, promises to be an interesting and exciting event with presentations from accomplished VHF and up amateur radio enthusiasts from several parts of the country. Registration, program details, hotel and travel information can be found in cyberspace at www.svhfs.org. (SE VHF Society)

**

HAM RADIO EVENTS: KIDS DAY A BIG MID-WEST SUCCESS

The first Kids Day operating event for 2002 was a rousing success in many venues. But in one Mid-West city a bit of coverage on a local T-V station helped to make it even better. Again to Amateur News Weekly and reporter Jack Parker, W8ISH:

--

Kids Day at the Indianapolis Chapter of the American Red Cross got a boost when event coordinator Stece Wendt, KB9RDS, made an appearance on a local TV news program. During the two minute segment. Wendt told viewers that all kids and their parents were welcome to share in the Amateur Radio experience, including an introduction to Morse Code, VHF repeaters and HF:

--
Wendt: “And then we turn around tand take them over to the big radios -- the big base station radios where they can talk -- literally -- around the world.”
--

This is the second year the local Red Cross chapter has shown young people how to tune in the world.

Reporting from Indianapolis Indians for Amateur News Weekly, This is Jack Parker, W8ISH.

--

This is just one of many Kids Day success stories. We will have more in future Amateur Radio Newsline reports. (Amateur News Weekly)

**

BREAK 2

From the United States of America, we are the Amateur Radio Newsline, with links to the world from our only official website - www.arnewsline.org.

(5 sec pause here)

**

ARNEWSLINE(tm) FINANCIAL UPDATE WITH N6TCQ

It’s time for a report on the financial situation here at Amateur Radio Newsline. With it is our Support Fund Administrator and Corporate Treasurer, Andy Jarema, N6TCQ:

--

It is January of 2002. A brand new year for ham radio. And the beginning of another year for us here at the Amateur Radio Newsline. And as we start off the new year, here are the current finances.

Looking in the new corporate checkbook, the balance shows us at about $700 give or take a few bucks. Not very much when you consider that it takes over a thousand dollars a month to produce these weekly 20 minute Q-S-T’s.

Obviously, Amateur Radio Newsline is going to need your help -- and -- need it quickly to keep it from going away and to keep the news of ham radio coming your way.

We have done all that is possible from our side to keep costs under control. But, some fixed expenses like the telephone and long distance calling are a must have. So are electronic mail and world wide web access. There is the cost of the routine maintenance on the tape machines and editing gear. And in a few months the Newsline sponsored Young Ham of the Year Award will be rolling our way. All of this adds up and some costs just keep going up. When you add it all up and average it out, it comes to that $1000 a month figure I just mentioned.

So now is the time when Amateur Radio Newsline has to ask to ask that you help to keep its newscasts coming your way. Your tax deductible contributions can be sent to the Newsline Support Fund, Post Office Box 660937, Arcadia California. The Zipcode is 91066.

Ill be back within the next few weeks with an update on how things are going. For now from the Amateur Radio Newsline support center, I'm Andy Jarema, N6-Tiny-California-Quake.

--

Don't worry if you missed the address. It will be repeated in a few minutes at the end of this weeks newscast. (ARNewsline(tm) Support Fund)

**

ARNEWSLINE(tm): WE ARE GOING MP3

One other piece of news concerning Amateur Radio Newsline. As of March 1st, we will be dropping Real Audio and going exclusively MP3. Why the change? Well ever since we began posting a downloadable MP3 file at our own FTP site along side the Real Audio file, 9 out of 10 people have chosen the MP3. And with good reason. MP3 simply sounds a lot better than Real Audio to most of you. And by dropping the Real Audio, we can make the MP3 sound even better by encoding at a higher bit rate.

Right now, you can still compare the two formats if you like. Until February 22nd we will continue to post both Real Audio and MP3. Take the time to download both. And don't worry. Most modern media players including Real Audio, Microsoft Media and Winamp play MP3 so the chances are that you are already equipped to cover of the digital format change. (ARNewsline(tm))

**

SCIENCE AND TECHNOLOGY: THE NOISE OF EARTH

According to Space Daily, researchers have known for three decades that the Earth is a potent radio transmitter, but they were never able to pinpoint where the noise was coming from. Recently, by using data from the four spacecraft of the European Space Agency's Cluster mission, NASA-funded scientists have precisely located the source of the radio noise along the magnetic field lines. The noise originates several thousand miles above bright regions in the Earth's
northern lights. (AMSAT, Space Daily)

**

INTERNATIONAL-CANADA: ARE AGREEMENT IN B.C.

Turning to international news, Radio Amateurs of Canada which sponsors that nation’s Amateur Radio Emergency Service has signed a Letter Of Understanding and the British Columbia Provincial Emergency Radio Communication Service. The letter represents the collaboration between Radio Amateurs of Canada’s British Columbia Section Manager Fred Orsetti VE7IO and Supervisor of Information and Communications Technology for the Provincial Emergency Program Andrew Bryan VE7KSN, to provide a cooperative plan to carry out emergency communication. The letter also further enhances the work of the Canadian ARES program and compliments the Memorandum of Understanding signed May of 1994 between Radio Amateurs of Canada and Red Cross. (RAC)

**

INTERNATIONAL - CANADA: VE1AWA RESIGNS AS MARITIME PROVENCES SM

Due to personal reason Roy MacIntosh, VE1AWA has stepped down from the position of Section Manager for the Maritimes. Tom Caithness, VE1GTC has been appointed acting Section Manager pending outcome of the upcoming election call. (RAC)

**

INTERNATIONAL - UK: AMSAT-UK COLLOQUIUM

The 17th AMSAT-UK Colloquium will be held at Surrey University in Guildford from the 26th to 28th of July this year. AMSAT-UK is now inviting speakers to submit papers about amateur radio space and associated activities for this event and for the Proceedings document. Offers of papers should be submitted as soon as possible and should be sent only to Richard Limebear, G3RWL. His e-mail goes to g3rwl@amsat.org. (AMSAT-UK)

**

HAM RADIO IN SPACE: WEBSITE UPDATE

AMSAT reports that IK8XLD has updated his website with information about satellite operations, EME, the ham radio operation on the International Space Station, ATV and homebrew equipment. You can visit Rocco’s website at www.qsl.net/ik8xld. (ANS)

**

DX

In DX, DJ4KW and DK9GG are active from Belize as V31YN and V31GW respectively until about the 2nd of February. Activity is on CW, RTTY and PSK 31. (GB2RS)

And KE1F will be active on 10 to 160 meters CW, SSB and perhaps RTTY as ZF2LM from Grand Cayman Island from the 14th to 30th of January. (GB2RS)

Also R1ANF began operations as CE9 slash R1ANF on the 29th of December from a Chilean base in the South Shetland Islands. He is active on 10 to 28 MHz with 100 watts to an R6000 vertical. For all three, QSL as directed on the air. (OPDX)

Last but by no means least, word that JX7DFA, is on a job assignment to Jan Mayen. He is operating as LA7DFA. QSL via his home call. He will reply when he returns home in the Spring. (Modern DX)

**

THAT FINAL ITEM: A CALL FOR ARDF HUNTERS FOR THE WORLD GAMES

And finally this week, 2002 may be the biggest year yet for fans of hidden transmitter hunts, especially the ones that are all on foot. Amateur Radio Newsline’s Joe Moell K0OV helps coordinate happenings like these and has news of two major events.
--

Every two years, hams from around the world gather to see who is best at on-foot hidden transmitter hunting, also called foxtailing, radio-orienteering and ARDF. There are separate events on eighty meters and two meters, each with five transmitters scattered in a forest that can encompass 1000 acres or more.

Competitors are divided into five categories for males and four categories for females. Each country may have up to three persons per category on its team.

Back in Y2K, the championships were in China, with a dozen stateside hams among the competitors from 26 countries. This year, the excitement moves to Slovakia and takes place from September 2 through 7. Once again, ARDF Team USA will be there.

Would you like to be on that team? If so, contact me right away, because USA must submit its Letter of Intent to the Slovakian hosts by the end of January.

Of course you'll need lots of practice beforehand, and you can get plenty by attending USA's own national ARDF championships, which will be April 19-21 in Pine Mountain, Georgia, near Atlanta.

Find out about both championships -- Slovakia and Pine Mountain -- by visiting my Web site: www.homingin.com. Homingin is one word. Then apply for the Team USA roster at my e-mail address on that site, or by postal mail to my callbook address.

Maybe you'll bring home a medal this year. From southern California, where this year's local radio-orienteering training sessions will begin soon, this is Joe Moell K-zero-Oscar-Victor for Amateur Radio Newsline.

--

In case you missed it, Joe’s website is www.homingin.com. “homeingin” is one word. (K0OV, ARNewsline(tm))

**

NEWSCAST CLOSE

With thanks to Alan Labs, Amateur News Weekly, AMSAT, the ARRL, the CGC Communicator, CQ Magazine, the FCC, the Ohio Penn DX Bulletin, Radio Netherlands, Rain, the RSGB and Australia's Q-News, that's all from the Amateur Radio Newsline(tm). Our e-mail address is newsline @arnewsline.org. More

information is available at Amateur Radio Newsline's(tm) only official website located at www.arnewsline.org. You can also write to us or support us at Amateur Radio Newsline(tm), P.O. Box 660937, Arcadia, California 91066.

A reminder that the nominating season for the Dayton Hamvention Radio Amateur of the Year, Technical Achievement and Special Achievement Awards closes January 31st. Nominations should be sent to Post Office Box 964 Dayton Ohio 45401. They can also be filed using the e-form at the Hamvention website. Its at www.hamvention.org.

For now, with Bill Pasternak, WA6ITF, at the editors desk, I'm _____ saying welcome to the year 2002, 73, and we thank you for listening." Amateur Radio Newsline(tm) is Copyright 2002. All rights reserved.

**

Terminal Break

**
RAIN promo
**

534. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 18:42:00 UTC
From: k7itm@aol.com
Message-ID: <3200347.0201181042.792b603d@posting.google.com>
Source record: 47176

Heh, heh, heh! So...I'm not colorblind (at least not in human vision terms), and I can see just fine that the three-output power supply on my bench behind me has FOUR IDENTICAL 5-way binding posts, all with red rims around the front of the "knob" part. You gotta look at the label on the front panel to know which is which. At least the labelling is fairly large and clear, readable to me with or without glasses. It is good to be reminded, though, that I can't assume color will be enough of a label on anything.

The complaints about color-coded parts? Well...just go to all surface-mount and you won't have that problem. The only color-coded SMT parts I can think of right off are bobbin inductors. Fortunately, they're labelling SMT capacitors now, but for quite a while they weren't and it was impossible to tell whether something was 10pF or 10nF just by looking at it. Of course you may well need a microscope to actually be able to read the lettering on the parts! My 10X magnifier starts to fail me with 0402 size resistors. It's pretty amazing to me that they can sell 1% resistors, complete with label, for about a penny each. But even with good color vision, I have trouble with some color-coded resistors: some of the manufacturers use a "red" that looks very "red-orange" -- and others use an "orange" that's shaded awfully far toward red. Those are the two that give me the most trouble, and it's no use trying to get the "multiplier" band from context as you often can the first two (or three, for 1%) digits.

Cheers,
Tom

jim.bolinger@lintek.aeroflex.com (JLB) wrote in message news:<8d5ec8a2.0201160541.3955e074@posting.google.com>...
> Slightly off topic, but I was curious if any other homebrewers or
> professionals have this pet peeve....
...

535. Re: Homebrew Construction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 20:02:13 UTC
From: Lynn Richardson <lrich@kc.rr.com>
Message-ID: <n8vg4ugr3rl36ntcnp39m2vlcmai391gtd@4ax.com>
Source record: 47177
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.components,sci.electronics.design,sci.electronics.misc,uk.radio.amateur

We called it brass-boarding back then (because of the similar old tube days technique of using brass sheets - copper laminated stock was non-existant that long ago) and 'dead bug-ed' (glued them upsidedown) the ICs too. Funny thing was that the RF circuits developed this way always worked better than the following laid-out PCB versions. Good ground planes and distance between parts was the key. For one-up homebrewing it's very hard to beat this technique for construction speed and circuit performance... alas, it /is/ butt-ugly though. :)

On 18 Jan 2002 10:23:07 -0800, k7itm@aol.com (Tom Bruhns) wrote:

>"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:<u4ek1j9ab97h71@corp.supernews.com>...
>> "Ben" <seabybs@hotmail.com> wrote in message
>> news:Z6H18.36816$Hg7.3713991@news11-gui.server.ntli.net...
>> > But quite a good idea all the same.
>>
>> Not exactly unique to Duncan, tho. The basic technique was popularized by
>> Jim Kortge, K8IQY, a number of years ago, and the "Islander" nomenclature by
>> the New Jersey QRP Club a little more recently.
>>
>> ..
>I wonder how old the idea is. I had a friend who used it about 30
>years ago, but it may be quite a bit older than that. (I find it
>faster to just fab a board...if it's a quick job, I'll toss down the
>traces that are obvious and do the rest with wire. Also lets me
>handle a much wider range of components.)
>
>Cheers,
>Tom

536. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 20:20:11 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C48837B.BCD63D1@clifto.com>
Source record: 47178

Tom Bruhns wrote:
> But even with good color vision, I have
> trouble with some color-coded resistors: some of the manufacturers
> use a "red" that looks very "red-orange" -- and others use an "orange"
> that's shaded awfully far toward red.

Some also use a brown that's reddish and a red that's brownish. I even
have a few 68K resistors where the blue and gray bands look nearly alike.

--
Remember, "close" counts in horse-shoes, hand-grenades and nuclear warfare,
but in spamming, it's considered unnecessary precision. -- Alun Jones

537. Re: Airfoils

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 20:53:59 UTC
From: Ian Jackson <ianjackson@g3ohx.demon.co.uk>
Message-ID: <obDqbCAntIS8Ew8i@g3ohx.demon.co.uk>
Source record: 47179

In article <20020114162133.23483.00002380@mb-md.aol.com>, Troglodite
<troglodite@aol.com> writes
>>
>>Very well, thank you.
>
>Well of course, and we all know that too.
>
>>Actually, the angle of attack on a symmetric airfoil (and no, they are NOT
>>curved and flat) is the same no matter which way the pilot's head is
>>oriented. Upside down is a relative term; the airplane has not a clue other
>>than the fact that the oil and fuel need some planning and forethought.
>
>The simple airfoils such as used on beginner model planes are flat on the
>bottom, but it really doesn't matter as you have pointed out. Fact is, a lot of
>people will accept the simple explanation, then are puzzled by the inverted
>question. Here's another for you:
>
>What's the difference between the letters in the top row and the bottom row?
>
>AEFHIKLMNTVWXYZ
>BCDGJOPQRSU
>
>73,
>
>Doug Moore
>
>P.S. Apologies for off topic message.
>

Surely a plane, flying inverted, only does so due to the skill of the
pilot. He is actually constantly keeping the plane in a controlled,
constant dive, but upwards (if you get my meaning). Also, if the
aerofoil section is assymetrical (top more curved than the bottom), the
lifting efficiency of the wings will be much lower when inverted.

All the top letters are made up from straight lines only. The bottom
ones contain curves.

73,
Ian.

538. Re: High Voltage Arcing???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 21:13:21 UTC
From: Edward2001 <Edward2001@peoplepc.com>
Message-ID: <3C488FF0.9D8B36C3@peoplepc.com>
Source record: 47195

Thanks for your input, Mike.

From the relay contacts, about 30 feet of wire runs out to the filament connections (using alligator clips to connect). When the tube arcs from the anode to the filament, the high voltage runs back along these wires, into the relay contacts. You will then see arcing between the relay contacts. What I want to do, is stop this high voltage from getting back to the relay contacts. I'm not sure the varistors, will handle this kind of energy.

You mentioned a screen. Tell me more about this? What is the idea of this?

Best regards....Brian

spike wrote:

> On Thu, 17 Jan 2002 18:57:16 +0000, Edward2001
> <Edward2001@peoplepc.com> wrote:
>
> >There is a step-up transformer (for the anode) and a step-down transformer
> >(for the filament).
> >
> >The secondary of the step-up transformer has one lead that goes through a
> >rectifier to the anode of two tubes. The other lead goes to ground.
> >
> >The step-down transformer has a center tap that goes to ground (through a
> >4.7K resistor for a meter). The other two leads of the secondary, go to the
> >two leads of the filament, through relay contacts (so we can select one of
> >two different tubes).
> >
> >The tubes are x-ray tubes, with just an anode and a filament. What we are
> >doing is seasoning the tubes, for the first time. Sometimes, the anode will
> >arc to the filament. Once in a while, when it arcs inside the tube, it will
> >also arc from a connection to the relay contact, to ground. When this
> >happens, it will burn a carbon trace to ground.
> >
> >It is a very simple circuit, but with this one problem. Any ideas?
>
> When you have started an arc, it is almost impossible to stop. Even if
> the arc starts inside a tube, it can easily lead to arcs on the
> outside, due to electro magnetic effects. The mechanics of your
> circuit layout might well be able to withstand quite a bit more than
> the 60kV you are subjecting it to, however under the extra stresses of
> the internal arc, may well break down.
>
> I would start by having a screen between the tube and where the fills
> volts are fed from. Feeding the fills connections through a feed

> through capacitor may well cause more trouble than it is worth, but I
> would certainly use a zenamic resistor (as you have suggested
> yourself) between each lead and ground at the point where they enter
> the tube area.
>
> I would try and make the layout as absolutely electro static resistant
> as possible, eg no sharp corners.
>
> It is very difficult to comment (as others have said) exactly how you
> could improve the situation without seeing the layout in some detail,
> though now you have described the circuit it is a little clearer.
> Perhaps you could put some photos on the web and post a link ?
>
> I have some experience with high power klystrons, at a little less
> beam voltage (26kV) but rather more than 5mA :-)
>
> All the best...Mike.

539. Re: Homebrew Construction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 22:21:33 UTC
From: Skipp <skipp@pilotNOSPAMPLEASE.ucdavis.edu>
Message-ID: <a2a75c$1n5$3@woodrow.ucdavis.edu>
Source record: 47180
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.components,sci.electronics.design,sci.electronics.misc,uk.radio.amateur

Your web page stinks... I'm on the fiber and it takes too long to load.
Consider revamping the page with less hype if you want people to stay
around and look at it. I can't imagine the poor guy on a dial up ISP
wanting to waste the time waiting for your page to load.

Next....!

skipp
http://sonic.ucdavis.edu

: In sci.electronics.basics pentode <pentode@ntlworld.com> wrote:
: If you are into homebrew radio/electronics construction,
: you may find the following URL interesting:
: www.copperisland.biz

540. Re: Homebrew Construction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 22:43:20 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <3C48A508.90E42F82@dialpoint.net>
Source record: 47181
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.components,sci.electronics.design,sci.electronics.misc,uk.radio.amateur

I have the dial up and the web page loaded just fine for me. Maybe your
stuff stinks ?

Skipp wrote:
>
> Your web page stinks... I'm on the fiber and it takes too long to load.
> Consider revamping the page with less hype if you want people to stay
> around and look at it. I can't imagine the poor guy on a dial up ISP
> wanting to waste the time waiting for your page to load.
>
> Next....!
>
> skipp
> http://sonic.ucdavis.edu
>
> : In sci.electronics.basics pentode <pentode@ntlworld.com> wrote:
> : If you are into homebrew radio/electronics construction,
> : you may find the following URL interesting:
> : www.copperisland.biz

541. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-18 23:30:12 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C48B004.7E24B352@eznec.com>
Source record: 47182

I'm not a pilot, but I was under the impression that the prohibition on flying at night wasn't due so much to inability to interpret light guns, but inability to distinguish wing lights. Without that ability, you couldn't tell if an aircraft was flying toward you or away from you. I thought the light guns were just used as a convenient and standard source of red and green lights for the test.

Roy Lewallen, W7EL

Jake Brodsky wrote:
>
> The really sad thing is that light guns in tower controlled airports
> are almost never used. In an era when battery powered hand-held
> aviation radios are inexpensive additions to most pilot's flight bags
> this requirement is like asking someone to demonstrate how to saddle
> up a horse to drive a car.
>
> Jake Brodsky, AB3A mailto:frussle@erols.com
> "Beware of the massive impossible!"

542. Re: Homebrew Construction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 00:12:41 UTC
From: ours@telus.net
Message-ID: <9d4cbfcf.0201181612.1f943e2c@posting.google.com>
Source record: 47183
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.components,sci.electronics.design,sci.electronics.misc,uk.radio.amateur

k7itm@aol.com (Tom Bruhns) wrote in message
news:<3200347.0201181023.32f89262@posting.google.com>...
> "xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:<u4ek1j9ab97h71@corp.supernews.com>...
> > "Ben" <seabybs@hotmail.com> wrote in message
> > news:Z6H18.36816$Hg7.3713991@news11-gui.server.ntli.net...
> > > But quite a good idea all the same.
> >
> > Not exactly unique to Duncan, tho. The basic technique was popularized by
> > Jim Kortge, K8IQY, a number of years ago, and the "Islander" nomenclature by
> > the New Jersey QRP Club a little more recently.
> >
> > ..
> I wonder how old the idea is. I had a friend who used it about 30
> years ago, but it may be quite a bit older than that. (I find it
> faster to just fab a board...if it's a quick job, I'll toss down the
> traces that are obvious and do the rest with wire. Also lets me
> handle a much wider range of components.)
>
> Cheers,

****
Definately not new!

Even cheaper and simpler is to go out and buy a bunch of small copper
or brass eyelets. Drill holes in vector board or even thin plywood.
Insert the eyelets and away you go! I did this back in the days of
Tubes!

Gary
> Tom

543. Re: Salvage Parts from a Microwave ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 00:21:24 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c48b891.34968949@news.erols.com>
Source record: 47184

On Wed, 16 Jan 2002 22:42:09 -0500, deputy.dawg@cartoons.tv wrote:

>Great 'fridge magnets in there.
>73,
>Jim

Yes, but alas! not for long. I spent time waiting my turn on the 3905CC Net last nite disassembling the microwave. Turn motor, fan, trannie and touch pad all in great shape. Unfortunately, I used the magnets to demonstrate " levitation" by suspending neg. to pos. with a dowel rod thru the hole in their middles. This worked great unitl the 12 year old decided to get grabby and flipped the magnets around and dropped them on top of each other. Of course they're now in bits. Kids ! For grabbing from her siblings, interrupting, and trashing my magnets (future science project I thought) she is punished with no internet this weekend. She's sulking in her room as I write.

In the meantime, can I ask some dumb questions? First, what was the device I levered them out of ? I thought the magnetron was the literal tube (which was toast, BTW). Also, is the diode the small piece that looks a like a resistor and is fastened from one pole of the HV Cap to chassis gnd ? Says, " HVR-1X 3 and SK 0625" ? has the solid triangle with point on vert. line symbol on it. |>|

TIA,

Cruel Father
Reticulum

Remove "your.hat" when replying via e-mail

544. Really stoopid inductor question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 00:25:48 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C48BD0C.316C2AD8@clifto.com>
Source record: 47185

This must not be my day. I'll spare you the details, but various means of
trying to figure the inductance of this coil have gotten me answers ranging
from 7 uH to 22,815 uH. Someone hand me a fish, please. T-80-26 core,
39 turns of #20 wire.

--
Remember, "close" counts in horse-shoes, hand-grenades and nuclear warfare,
but in spamming, it's considered unnecessary precision. -- Alun Jones

545. Re: MMIC based preamp for R2 receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 00:59:25 UTC
From: brocks@mailandnews.com
Message-ID: <674752f2.0201181659.2e9069ef@posting.google.com>
Source record: 47186

Thanks for the responses. I was planning on using a full size dipole antenna. I had heard that a preamp was a good idea for 20M. I plan to use this radio in remote locations and thought that by switching in a preamp I would be able to pull in some otherwise unreadable signals. But for now I won't worry about preamps or filters and add them latter as needed.

Brock Schuler, VA6BTS

546. Need data for 6AQ5/6V6 (to be used in a shunt regulator)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 01:17:31 UTC
From: la8ak.xnd@online.no
Message-ID: <3c48c874.374759589@news.online.no>
Source record: 47187

Need to know the max anode current with 100V screen- and anode
voltage, zero bias
Suspect it is only 20mA, have some experience earlier with this type
as shunt regulator. Would also like data for the E80L. Only few
handbooks shows diagram for triode-connected device, and I have only
Philips handbooks for normal receiving types dated 1940, 42 and 67
Searching internet did not give any such information, only short data
was found, with voltage above 200V - which is not at all interesting
for my 90V shunt regulator

73,
Jan_Martin
LA8AK
N4623-Kristiansand
tel.: +47-380-87178, QRL: 380-52660, 90777126
Batterie Vara (38cm heavy gun) http://home.no.net/bttvara/enter.html
--
remove ,xnd to reply

547. Re: Really stoopid inductor question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 01:24:21 UTC
From: Your Friend Bill <"Remove The NO In The Reply To Address"@coqui.net>
Message-ID: <3C48CAC5.59FA0DCB@coqui.net>
Source record: 47188

"Clifton T. Sharp Jr." wrote:
>
> This must not be my day. I'll spare you the details, but various means of
> trying to figure the inductance of this coil have gotten me answers ranging
> from 7 uH to 22,815 uH. Someone hand me a fish, please. T-80-26 core,
> 39 turns of #20 wire.

Call it 136uh.

-Bill

548. Re: Need data for 6AQ5/6V6 (to be used in a shunt regulator)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 01:34:22 UTC
From: Your Friend Bill <"Remove The NO In The Reply To Address"@coqui.net>
Message-ID: <3C48CD1E.7AC7DBB9@coqui.net>
Source record: 47189

J M Noeding wrote:
>
> Need to know the max anode current with 100V screen- and anode
> voltage, zero bias
> Suspect it is only 20mA, have some experience earlier with this type
> as shunt regulator. Would also like data for the E80L. Only few
> handbooks shows diagram for triode-connected device, and I have only
> Philips handbooks for normal receiving types dated 1940, 42 and 67
> Searching internet did not give any such information, only short data
> was found, with voltage above 200V - which is not at all interesting
> for my 90V shunt regulator
>
> 73,
> Jan_Martin
> LA8AK

AVERAGE current on a triode connected 6AQ5 in that voltage configuration
is shown on a graph in the RCA manual as about 35ma. Does that help?
The 6V6 listing says to refer to 6AQ5.
-Bill

> N4623-Kristiansand
> tel.: +47-380-87178, QRL: 380-52660, 90777126
> Batterie Vara (38cm heavy gun) http://home.no.net/bttvara/enter.html
> --
> remove ,xnd to reply

549. Locator square formula's

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 01:39:34 UTC
From: Scheveneels <kscheveneels@planetinternet.be>
Message-ID: <a2aiolbnk1@news.planetinternet.be>
Source record: 47190

Hello all,

I am looking for some formula's to make a computer program
wich turns my antenna's automatically.

the purpose of the program :

If I start a QSO with another station , I simply fill in his locator
in my program , and the antenna's must turn in his direction
automatically.

What I allready have :

I can convert the regular squares into degrees and minutes, so when I
fill in a locator, I know the other station's co�rdinates .

What the problem is :

Now I have my co�rdinates , and the other station's co�rdinates ,
but how can I calculate the angle (the azimuth for the antenna's to
turn to) between these two places ??
Does anyone knows some formula's or interesting sites to find out ?
or maybe anybody who has experi�nce with this kind of programs
who can help me on my way ...

If you can provide me some usefull information , than I will send you
a copy of my program (if interested ...) but I'm hoping to have it
online when it finally works .

Anyways , thanks for reading , best 73'
and good DX !

de Kevin , ON1DRE .

550. Re: Locator square formula's

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 01:51:31 UTC
From: ac6v <ac6v@amsat.org>
Message-ID: <3C48D123.E35CBAC5@amsat.org>
Source record: 47191

Maybe download the Grid Square Calculator at URL:
http://www.arrl.org/locate/gridinfo.html#programs

Perhaps examining the program will reveal the information you seek.
--
73 From AC6V, Rod In Oceanside, CA
I doubt, therefore I might be!
AC6V Mega Ham Index at http://ac6v.com
AC6V Book For DXers at http://ac6v.com/DXSAMPLE.htm
AC6V Brag Tape at http://ac6v.com/brag.htm
==========
Scheveneels wrote:

> Hello all,
>
> I am looking for some formula's to make a computer program
> wich turns my antenna's automatically.
>
> the purpose of the program :
>
> If I start a QSO with another station , I simply fill in his locator
> in my program , and the antenna's must turn in his direction
> automatically.
>
> What I allready have :
>
> I can convert the regular squares into degrees and minutes, so when I
> fill in a locator, I know the other station's coï¿½rdinates .
>
> What the problem is :
>
> Now I have my coï¿½rdinates , and the other station's coï¿½rdinates ,
> but how can I calculate the angle (the azimuth for the antenna's to
> turn to) between these two places ??
> Does anyone knows some formula's or interesting sites to find out ?
> or maybe anybody who has experiiï¿½nce with this kind of programs
> who can help me on my way ...
>
> If you can provide me some usefull information , than I will send you
> a copy of my program (if interested ...) but I'm hoping to have it
> online when it finally works .
>
> Anyways , thanks for reading , best 73'
> and good DX !
>

> de Kevin , ON1DRE .

551. Ham Radio University 2002 for Long Island

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 01:55:13 UTC
From: GSBARC <info@gsbarc.org>
Message-ID: <5m428.9140$8P3.2811222@news02.optonline.net>
Source record: 47192
Cross-posted to: rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.swap

Ham Radio University 2002/ARRL New York City-Long Island Section Convention

North Babylon, New York - On Sunday, January 20, 2002 at 8AM, the doors of the Babylon Town Hall Annex on Phelps Lane will open for the third annual Ham Radio University. Ham Radio University 2002 is a day of education about Amateur Radio.

This year the forums have been expanded and new forums have been added. There will be twenty, one-hour presentations with special forums geared to the non-ham as well as the experienced ham radio operator. The focus will be "hands on" with many demonstrations.

Come join us at the Babylon Town Hall Annex, Phelps Lane, North Babylon, Long Island, and learn about everything from satellite communications, low power operating using radios as small as a tuna tin, how to put up an emergency antenna, the latest information on advanced digital communications, finding and fixing radio frequency interference problems to purchasing your first station equipment or handi-talkie and a special "Ask the Experts" forum. There will also be a Special Event Station W2V set up and operational on HF. There will live SSTV pictures uploaded to the NLI WWW during the event.

TALK-IN W2GSB/r 146.685 -600 110.9 PL

HRU 2002 is sponsored by the Great South Bay ARC and is a cooperative effort between over twenty clubs and organizations in the New York City- Long Island area. It is also the American Radio Relay League, New York City-Long Island Section Convention. Besides the forums, there will be tables set up with information about the different groups, ham radio classes, exam session schedules, public service and other activities.

Join us for a day of fun and education for the whole family!
Admission is open to all - donation is $2 per person.
(complimentary refreshments available)

For more information contact:
Phil Lewis N2MUN, Chairman, n2mun@arrl.net or call 631-226-0698
George Tranos N2GA, ARRL NLI Section Manager, n2ga@arrl.org or call 631-286-7562

Additional information on the WWW at http://hudson.arrl.org/nli
NNNN

552. Re: Homebrew Construction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 02:44:53 UTC
From: Richard Crowley <rcrowley7@xprt.net>
Message-ID: <u4hnd6egg1afc7@corp.supernews.com>
Source record: 47193
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.components,sci.electronics.design,sci.electronics.misc,uk.radio.amateur

"Skipp" wrote ...
> Your web page stinks... I'm on the fiber and it takes too long to load.
> Consider revamping the page with less hype if you want people to stay
> around and look at it. I can't imagine the poor guy on a dial up ISP
> wanting to waste the time waiting for your page to load.

I AM a "porry guy on a dial-up ISP" and the web page loads just fine for me
(@ 48Kb)

Perhaps your campus network has a problem.

553. Re: Homebrew Construction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 02:50:19 UTC
From: Your Friend Bill <"Remove The NO In The Reply To Address"@coqui.net>
Message-ID: <3C48DEEB.75C16CB6@coqui.net>
Source record: 47194
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.components,sci.electronics.design,sci.electronics.misc,uk.radio.amateur

Richard Crowley wrote:
>
> "Skipp" wrote ...
> > Your web page stinks... I'm on the fiber and it takes too long to load.
> > Consider revamping the page with less hype if you want people to stay
> > around and look at it. I can't imagine the poor guy on a dial up ISP
> > wanting to waste the time waiting for your page to load.
>
> I AM a "porry guy on a dial-up ISP" and the web page loads just fine for me
> (@ 48Kb)
>
> Perhaps your campus network has a problem.

Works good for me too (dialup at about 38k). In fact, I'd say it loads
FASTER than most given the amount of stuff on the page.
-Bill in Puerto Rico

554. Re: Really stoopid inductor question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 04:34:27 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C48F753.10A214D2@clifto.com>
Source record: 47196

Your Friend Bill wrote:
> "Clifton T. Sharp Jr." wrote:
> > This must not be my day. I'll spare you the details, but various means of
> > trying to figure the inductance of this coil have gotten me answers ranging
> > from 7 uH to 22,815 uH. Someone hand me a fish, please. T-80-26 core,
> > 39 turns of #20 wire.
>
> Call it 136uh.

:) That was not one of the many answers I got. :)

This is really back-to-basics stuff for me. This is the very first time in
my life I've actually analyzed a coil. Before this it has always been
off-the-shelf, clearly marked and ready-to-solder-in where I was concerned.

--
Remember, "close" counts in horse-shoes, hand-grenades and nuclear warfare,
but in spamming, it's considered unnecessary precision. -- Alun Jones

555. Re: Really stoopid inductor question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 05:02:31 UTC
From: Your Friend Bill <"Remove The NO In The Reply To Address"@coqui.net>
Message-ID: <3C48FDE7.3B16445@coqui.net>
Source record: 47097

"Clifton T. Sharp Jr." wrote:
>
> Your Friend Bill wrote:
> > "Clifton T. Sharp Jr." wrote:
> > > This must not be my day. I'll spare you the details, but various means of
> > > trying to figure the inductance of this coil have gotten me answers ranging
> > > from 7 uH to 22,815 uH. Someone hand me a fish, please. T-80-26 core,
> > > 39 turns of #20 wire.
> >
> > Call it 136uh.
>
> :) That was not one of the many answers I got. :)
>
> This is really back-to-basics stuff for me. This is the very first time in
> my life I've actually analyzed a coil. Before this it has always been
> off-the-shelf, clearly marked and ready-to-solder-in where I was concerned.

I'm not much of a whiz with math, but I think I got it right. I used
the standard formula you see everywhere...don't know how to do math on
the keyboard, but you can double check with.. X turns=100 times the
square root of (the mystery inductance divided by the published
inductance per 100 turns). The published 100-turn number in this case
was 895.
In looking around on Google to see if there was an easy way, I found a
couple of online calculators. Great! but they didn't handle your core
size.

If it doesn't work, well, blame me :-)

Adios,
Bill WX4A

Posted Via Binaries.net = SPEED+RETENTION+COMPLETION = http://www.binaries.net

556. Re: Really stoopid inductor question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 05:08:58 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C48FF6A.1A86FB15@clifto.com>
Source record: 47098

Your Friend Bill wrote:
> "Clifton T. Sharp Jr." wrote:
> I'm not much of a whiz with math, but I think I got it right. I used
> the standard formula you see everywhere...don't know how to do math on
> the keyboard, but you can double check with.. X turns=100 times the
> square root of (the mystery inductance divided by the published
> inductance per 100 turns). The published 100-turn number in this case
> was 895.

This shows part of the reason I got so many different answers.
<http://users.cyberelectric.net.au/~rjandusimports/ip_al_1.html> gives
460. Then from another page on the same site, 45 turns of #21 wire on
a T-80-26 gives 51.3 uH.
(http://users.cyberelectric.net.au/~rjandusimports/dc_choke.html)
Other places gave formulas that I tossed rough but close values into, and
that's where I got as low as 7 uH and as high as 22,815 uH.

Confusing!

> In looking around on Google to see if there was an easy way, I found a
> couple of online calculators. Great! but they didn't handle your core
> size.

And I don't have Java. :(Not *working* Java, anyway.

--
Remember, "close" counts in horse-shoes, hand-grenades and nuclear warfare,
but in spamming, it's considered unnecessary precision. -- Alun Jones

557. Re: 160 meter antenna, need suggestions, limited space

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 05:39:21 UTC
From: Terry <tsanford@nf.sympatico.ca>
Message-ID: <3C490689.3960A47E@nf.sympatico.ca>
Source record: 47099

> "gudmundur" <hexter@blazenet.net> wrote in message
> news:u444arcmcuej61@corp.supernews.com...
> > I have limited space for this 160 meter project. Also, I am interested
> > in an antenna for local ground wave coverage as opposed to sky wave dx
> > use.
> > Our problem on 80 mtrs seemed to be that we 'skipped' right out
> > over each other. I could get good 5/9 reports from Florida at apprx
> > 1200 miles away, and could barely hear my freinds of only 12 miles away.

FWIW had similar problem many years ago in the military on approx 5
megahertz. AM voice about 25 watts.
As night fell good communication with a station some 10 miles away faded
out, while communication several hundred miles away remained OK. We
attributed to fact that we had not been communicating with a ground wave
at all but had been using sky wave reflection, even over the shorter
distance.
Then, as the sun disappeared the Heavyside/Ionospheric layers being less
intensely ionized contracted and came down closer to the earth and our
signals were just not being reflected correctly for the shorter
distance.
Just a theory! Terry.

558. Re: Really stoopid inductor question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 05:46:32 UTC
From: Your Friend Bill <"Remove The NO In The Reply To Address"@coqui.net>
Message-ID: <3C490838.5BA4C130@coqui.net>
Source record: 47100

"Clifton T. Sharp Jr." wrote:
>
> Your Friend Bill wrote:
> > "Clifton T. Sharp Jr." wrote:
> > I'm not much of a whiz with math, but I think I got it right. I used
> > the standard formula you see everywhere...don't know how to do math on
> > the keyboard, but you can double check with.. X turns=100 times the
> > square root of (the mystery inductance divided by the published
> > inductance per 100 turns). The published 100-turn number in this case
> > was 895.
>
> This shows part of the reason I got so many different answers.
> <http://users.cyberelectric.net.au/~rjandusimports/ip_al_1.html> gives
> 460. Then from another page on the same site, 45 turns of #21 wire on
> a T-80-26 gives 51.3 uH.
> (http://users.cyberelectric.net.au/~rjandusimports/dc_choke.html)
> Other places gave formulas that I tossed rough but close values into, and
> that's where I got as low as 7 uH and as high as 22,815 uH.
>
> Confusing!

Indeed. Apart from the oselectronics.com catalog that gives an AL of
895, I find it surprising that the new folks that have apparently taken
over Amidon don't have any of the AL charts on the website...or at least
I can't find them. They used to be there and IIRC they jived with the
ones on os...com
Time for the dipper.

-Bill (Formerly Of)

_____
Posted Via Binaries.net = SPEED+RETENTION+COMPLETION = http://www.binaries.net

559. Re: Locator square formula's

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 07:01:53 UTC
From: rexa*non*spam*@dnai.com
Message-ID: <q96i4u8diheauf6afqvt2hm1afp8mhqcoc@4ax.com>
Source record: 47101

On Sat, 19 Jan 2002 02:39:34 +0100, in rec.radio.amateur.homebrew,
"Scheveneels" <kscheveneels@planetinternet.be> wrote:

>What the problem is :
>
> Now I have my coï¿½rdinates , and the other station's coï¿½rdinates ,
> but how can I calculate the angle (the azimuth for the antenna's to
> turn to) between these two places ??
> Does anyone knows some formula's or interesting sites to find out ?
> or maybe anybody who has experiï¿½nce with this kind of programs
> who can help me on my way ...
>

Part of the question is how accurate do you want to be. That
basically means do you assume a spherical earth or use a more
accurate ellipsoid model.

There are tons of resources on the web if you start searching. Most
algorithms will be in C. Many others in fortran. I know of one
that's an Excel xls page. Of course there's the uncoded math formula
descriptions too.

Anyway here are a few links to start your quest:

http://williams.best.vwh.net/avform.html#Crs

http://ftp.census.gov/pub/geo/gis-faq.txt

http://www.anzlic.org.au/icsm/gdatm/index.html

Hope something in there helps. I've done this myself (not that I
totally understand the math) but I don't have just one short code
snippet to hand you. Here's one place I used this stuff.

http://www.dnai.com/~rexa/Projects/gl_dist.html

There is source code available for my palm program on that last
link, but you would have to dig out the relevant parts if you want
to write your program.

Good luck, and have fun.

-Rex, KK6MK

spam sucks more and more -- for mail, reply to:

the four letters < rexa > plus <the at sign> plus the four letters
dnai plus the standard dotcom ending

560. Re: 40metter antenna/tunner.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 08:21:37 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0201190021.3fb25945@posting.google.com>
Source record: 47102

Kc7eip <kc7eip@shaw.ca> wrote in message
news:<Xns919A3E5FABFA3kc7eipshawca@24.64.223.211>...
> nm5k@wt.net (Mark Keith) wrote in
> news:25eb70d7.0201171551.205a81fb@posting.google.com:
> > You may have already bought parts, but myself, I would just use a
> > center fed 1/2 wave dipole fed with coax. This will be very efficient.
> > About as good as you can get really. Running qrp, you don't want or
> > need extra losses from a tuner. Using a 1/2 wave coax fed dipole, you
> > won't need one. Also you will vastly reduce the likelyhood of common
> > mode problems by using a center fed dipole rather than an end fed 1/2
> > wave. The center fed will work better in most cases. I bet 90%..And
> > the best part is it's very cheap. MK
>
> No i guess i was lucky enough to call the store ahead of time and fined
> they were out of toroids so i decieded to wait on the parts... in the i
> guess i am lucky... as far as centerfed halfwave dipole how i saw some
> articles on that as well but the required a specific length and type of
> coax to get a good match... any ideas on the length and type i would need
> for 40 meters?

About 65-66 ft total "both sides" depending on where you want it
tuned. You can start a little long and trim to match if you have an
SWR meter. You really want 50 ohm coax of some type. Rg-58, rg-8,
rg-213, etc, etc. But about anything will work in a pinch. Even old
cable tv coax. It's 75 ohm, but assuming a perfect match with 50 ohm
coax, switching to 75 ohm would only give you a 1.4 to 1 match. No
biggie.. But if you have the money, you might as well invest in some
decent coax. I prefer 213 for HF. But even thin rg-58 will have fairly
low loss on 40m as long as it's not too long. Say over 100-200 ft or
so. Even then it's not too bad unless you go up to 10m. MK

561. Re: Really stoopid inductor question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 08:44:14 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <a2bbktcag1@paris.btinternet.com>
Source record: 47103

"Your Friend Bill" <"Remove The NO In The Reply To Address"@coqui.net> wrote
in message news:3C48CAC5.59FA0DCB@coqui.net...
> "Clifton T. Sharp Jr." wrote:
> >
> > This must not be my day. I'll spare you the details, but various means
of
> > trying to figure the inductance of this coil have gotten me answers
ranging
> > from 7 uH to 22,815 uH. Someone hand me a fish, please. T-80-26 core,
> > 39 turns of #20 wire.
>
> Call it 136uh.

I make it 136 uH as well, in case Clifton needs a second opinion.

73, Leon
--
Leon Heller, G1HSM leon_heller@hotmail.con
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

562. Re: Locator square formula's

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 11:06:56 UTC
From: Tom2000 <tom2000@mindspring.com>
Message-ID: <tlki4uc9cfghe7k5k6reieofobhq1ef8bd@4ax.com>
Source record: 47104

On Sat, 19 Jan 2002 02:39:34 +0100, "Scheveneels"
<kscheveneels@planetinternet.be> wrote:

> Hello all,
>
>I am looking for some formula's to make a computer program
>wich turns my antenna's automatically.
>
>the purpose of the program :
>
> If I start a QSO with another station , I simply fill in his locator
> in my program , and the antenna's must turn in his direction
>automatically.
>
>What I allready have :
>
> I can convert the regular squares into degrees and minutes, so when I
> fill in a locator, I know the other station's co?rdinates .
>
>What the problem is :
>
> Now I have my co?rdinates , and the other station's co?rdinates ,
> but how can I calculate the angle (the azimuth for the antenna's to
> turn to) between these two places ??
> Does anyone knows some formula's or interesting sites to find out ?
> or maybe anybody who has experi?nce with this kind of programs
> who can help me on my way ...
>
>If you can provide me some usefull information , than I will send you
>a copy of my program (if interested ...) but I'm hoping to have it
>online when it finally works .
>
>Anyways , thanks for reading , best 73'
>and good DX !
>
> de Kevin , ON1DRE .
>

Kevin,

You need to write a great circle bearing routine. Here's something I
found on the net a long time ago. (Unfortunately, I didn't remember to put
the URL in the document, so I don't know its source.)

Hope it helps.

Very 73,

Tom AB9B

Great-circle course (or bearing):

Suppose point 1 is LAX: (33deg 57min N, 118deg 24min W)
Suppose point 2 is JFK: (40deg 38min N, 73deg 47min W)

In radians LAX is

(33+57/60)*pi/180=0.592539, (118+24/60)*pi/180=2.066470

and JFK is

(0.709186,1.287762)

The distance from LAX to JFK is

d=acos(sin(lat1)*sin(lat2)+cos(lat1)*cos(lat2)*cos(lon1-lon2))
=acos(sin(0.592539)*sin(0.709186)+
cos(0.592539)*cos(0.709186)*cos(0.778708))
=acos(0.811790)
=0.623585 radians
=0.623585*180*60/pi=2144nm

The initial true course out of LAX is:

sin(-0.778708)=-0.702<0 so

tc1=acos((sin(lat2)-sin(lat1)*cos(d))/(sin(d)*cos(lat1)))
=acos((sin(0.709186)-sin(0.592539)*cos(0.623585))/
(sin(0.623585)*cos(0.592535))
=acos(0.408455)
=1.150035 radians
=66 degrees

563. Free flash PIC programmer software for Windows

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 11:25:21 UTC
From: g0jvy@yahoo.co.uk
Message-ID: <3373114e.0201190325.740e631@posting.google.com>
Source record: 47105
Cross-posted to: comp.arch.embedded.piclist,comp.arch.embedded,sci.electronics.design,rec.radio.amateur.homebrew

Most simple schemes for programming flash PIC microcontrollers involve direct connection of the PIC to a PC via either a parallel or serial port. Free Windows (95/98/Me/NT/2k/XP) software which can be configured to work with many of these schemes is now available from:

http://www.man.ac.uk/~mbhstdj/piclinks.html

There is currently very little supporting documentation but the most important functions should be fairly self explanatory. No support is offered although bug reports, expressions of frustration and so on can be sent to david.tait at man.ac.uk.

564. Re: Homebrew Construction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 11:50:53 UTC
From: "MattD.." <mattd145@msn.com>
Message-ID: <Xns919B78871B2DCgw0vnrmattd@130.133.1.4>
Source record: 47106
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.components,sci.electronics.design,sci.electronics.misc,uk.radio.amateur

Skipp wrote in news:a2a75c$1n5$3@woodrow.ucdavis.edu:

<Snip>

With respect, may I suggest you return to your fibre provider and
immediately ask for a refund? It takes exactly 12 seconds for my 64K ISDN
line to load the index page of www.copperisland.biz, so someone's 'pulling
your pi$$er' mate.

--
MattD..
GW0VNR

email to matt <at> mattsnetwork <dot> co <dot> uk

Fight Spam! Join EuroCAUCE: http://www.euro.cauce.org/

http://www.mattsnetwork.co.uk/

Using XNews, Luu Tran's excellent NNTP software.
http://www.xnews.3dnews.net/

565. Re: Need data for 6AQ5/6V6 (to be used in a shunt regulator)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 11:51:45 UTC
From: la8ak.xnd@online.no
Message-ID: <3c49597a.411890983@news.online.no>
Source record: 47107

On Fri, 18 Jan 2002 21:34:22 -0400, Your Friend Bill <"Remove The NO
In The Reply To Address"@coqui.net> wrote:

>J M Noeding wrote:
>>
>> Need to know the max anode current with 100V screen- and anode
>> voltage, zero bias

>
>AVERAGE current on a triode connected 6AQ5 in that voltage configuration
>is shown on a graph in the RCA manual as about 35ma. Does that help?
>The 6V6 listing says to refer to 6AQ5.
>-Bill

Tnx

Never knew such manual existed, but suspected it. Seems that I can use
this device. What is grid voltage for 10mA a+g2 current @90V and what
is the grid cutoff voltage (zero anode current) on 120V ?

Once used 6AQ5/6005/EL90 as a screen voltage regulator, but believe
6BQ5/EL84 is better because it has lower grid voltage swing from zero
to 40mA current with 150-300V anode/g2 voltage

73
LA8AK
--
remove ,xnd to reply

566. 2m drive to 20m transverter anyone?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 11:56:01 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c495e0d.3413999@news.freeserve.net>
Source record: 47108

HI Folks, I'm looking for inspiration and existing designs for a 2m to
20m transverter, similar to the Tokyo MX-240.
any ideas?.
cheers Mike W, G8NXD, M3MSM

567. Re: Really stoopid inductor question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 12:03:03 UTC
From: amdx <amdx@att.net>
Message-ID: <Xfd28.381019$W8.14072147@bgtnsc04-news.ops.worldnet.att.net>
Source record: 47109

The Amidon book says that core has an A sub L of 450uh per 100 turns
Using the formula L in uh= A sub L x N sqr / 10,000

L= 450 x 39 x 39 / 10,000
L = 684450 / 10,000
L = 68.45uh

The Amidon book also says that a 40 turn T-80-26 inductor is 72uh.

568. Re: Really stoopid inductor question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 12:03:04 UTC
From: amdx <amdx@att.net>
Message-ID: <Yfd28.381020$W8.14072775@bgtnsc04-news.ops.worldnet.att.net>
Source record: 47110

The Amidon book says that core has an A sub L of 450uh per 100 turns
Using the formula L in uh= A sub L x N sqr / 10,000

L= 450 x 39 x 39 / 10,000
L = 684450 / 10,000
L = 68.45uh

The Amidon book also says that a 40 turn T-80-26 inductor is 72uh.

Mike

569. Re: Really stoopid inductor question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 12:15:26 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <u0ob2a.uar.ln@my.linux.box>
Source record: 47111

In article <3C48FF6A.1A86FB15@clifto.com>, Clifton T. Sharp Jr. wrote:

> And I don't have Java. :(Not *working* Java, anyway.

The SUN JVM works very well with Mozilla and Netscape.

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

570. Re: Need data for 6AQ5/6V6 (to be used in a shunt regulator)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 13:33:19 UTC
From: Eike Lantzsch <eikelan@gmx.net>
Message-ID: <slrna4itcv.ace.eikelan@ID-77364.user.dfncis.de>
Source record: 47112

J M Noeding wrote:
> Need to know the max anode current with 100V screen- and anode
> voltage, zero bias
> Suspect it is only 20mA, have some experience earlier with this type
> as shunt regulator. Would also like data for the E80L. Only few
> handbooks shows diagram for triode-connected device, and I have only
> Philips handbooks for normal receiving types dated 1940, 42 and 67
> Searching internet did not give any such information, only short data
> was found, with voltage above 200V - which is not at all interesting
> for my 90V shunt regulator
>
> 73,
> Jan_Martin
> LA8AK
> N4623-Kristiansand
> tel.: +47-380-87178, QRL: 380-52660, 90777126
> Batterie Vara (38cm heavy gun) http://home.no.net/bttvara/enter.html
> --
> remove ,xnd to reply

You might also want to ask for help over there --> rec.audio.tubes
Some pretty savvy and helpfull guys are around there.

Regards, Ike
--
. . Eike Lantzsch ZP6CGE
<___> CdC 1519 ASUNCION PY
____|\|\ ____ .ooo../ www.geocities.com/cgelantzsch/index.html
_________\ _____/ rattle, aim, sting, wait, incorporate

571. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 13:58:45 UTC
From: "Carl R. Stevenson" <wa6vse-shack@fast.net>
Message-ID: <3c497c8d_1@news7.fast.net>
Source record: 47113
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

"William E. Sabin" <sabinw@mwci.net> wrote in message
news:3C404F5C.6040901@mwci.net...
> Carl R. Stevenson wrote:
>
> > The entire issue of opposite sideband rejection can be
> > rendered rather moot, if one uses the "Weaver" or "3rd
> > method" of generating SSB, which is a variation on the
> > phasing scheme.
>
>
> This is true only if the two required lowpass
> filters are ideal boxcar FIR filters, which is the
> same as the requirement for conventional SSB using
> the phasing method. The Weaver method is no
> panacea either.
>
> Bill W0IYH

Bill,

But of course ... but in DSP, they can be very nearly
ideal, with the result that out of channel emissions
can be VERY low because of what I said about the
undesired sideband and the desired occupying the
same frequencies centered about the (suppressed)
carrier, which is at channel center.

Carl - wa6vse

572. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 14:19:50 UTC
From: "Carl R. Stevenson" <wa6vse-shack@fast.net>
Message-ID: <3c498187_1@news7.fast.net>
Source record: 47114
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

"Gary Schafer" <gschafer@mediaone.net> wrote in message
news:3C423535.3D41F05C@mediaone.net...
>
[snip]
>
> This old business of accepting the 300 to 3000 hz bandwidth as the "ideal
> communications bandwidth" I think is just that. Old. This is a carryover
from the old
> telephone days when it was easier to limit the bandwidth to avoid some of
the problems
> of transmission.

It is also clearly a question of spectral efficiency ... while "hi-fi"
audio might sound a bit better, it does occupy more bandwidth.
I think we need to consider the tradeoff of "communications
quality" audio vs. spectral occupancy (remember, the wider the
audio bw, the further out the IM products will extend as well ...)

> Also most SSB rigs suffer some of the same problems. Especially
> limiting the lower frequencies. The old phasing rigs had problems
maintaining a
> constant phase shift at low frequencies. How to correct for the problem,
limit the low
> frequencies. Filter rigs have some of the same problems with side band
suppression at
> low frequencies.

I don't disagree with this ... but, as Gary has pointed out, that
is not really a problem with modern DSP-based approaches.

> This so called "communications quality audio that most rigs have is
> really next to awful audio. Especially when some of them are further
degraded with
> limited range microphones. Some of the signals on the air make your ears
bleed let
> alone hardly being intelligible. I think it is time and the technology is
available
> that we can have much better sounding signals and still be well restricted
in channel
> occupied width. There are so many really distorted transmitters on the air
from poor
> audio processing to poor amplifier performance.

I find that most of the signals I hear are "acceptable" in
audio quality for the purpose of communication ... while

I also have to admit that you're correct that there are SOME
which are so distorted (over-driven/over-processed, etc.)
that they are hard to understand and unpleasant to listen to.

Your comment about having better sounding signals and still
being spectrally efficent is noted ...

73,
Carl - wa6vse

573. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 14:31:25 UTC
From: "Carl R. Stevenson" <wa6vse-shack@fast.net>
Message-ID: <3c498444_1@news7.fast.net>
Source record: 47115
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

"Gary Coffman" <ke4zv@bellsouth.net> wrote in message
news:jn214ush0ttfcuu9bno8502iddrnivj7b1@4ax.com...
> On Sat, 12 Jan 2002 08:59:40 -0600, "William E. Sabin" <sabinw@mwci.net>
wrote:
> >Carl R. Stevenson wrote:
> >
> >> The entire issue of opposite sideband rejection can be
> >> rendered rather moot, if one uses the "Weaver" or "3rd
> >> method" of generating SSB, which is a variation on the
> >> phasing scheme.
> >
> >
> >This is true only if the two required lowpass
> >filters are ideal boxcar FIR filters, which is the
> >same as the requirement for conventional SSB using
> >the phasing method. The Weaver method is no
> >panacea either.
>
> No, it isn't the same. The Weaver method requires
> more computational complexity than simply generating
> a Hilbert transform.
>
> Gary

I would agree with Gary's statement as being fundamentally
true, but would counter with the following points:
1) the I/Q LO(s) can be easily generated in dedicated
hardware using NCO technology with virtually perfect
phase and amplitude relationships
2) the filtering requirement is for 2 identical FIR filters
3) thus, one can make a tradeoff between dedicated
digital hardware and programable DSP
4) finally, CPU cycles are ever-becoming cheaper
and cheaper, rendering the issue of computational
complexity increasingly moot in terms of cost impact.

73,
Carl - wa6vse

574. Re: 2m drive to 20m transverter anyone?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 15:00:10 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <ql1c2a.t5t.ln@my.linux.box>
Source record: 47116

In article <3c495e0d.3413999@news.freeserve.net>, Mike W wrote:
> HI Folks, I'm looking for inspiration and existing designs for a 2m to
> 20m transverter, similar to the Tokyo MX-240.
> any ideas?.
> cheers Mike W, G8NXD, M3MSM

It's probably easier to transvert from 2 to 20 than it
is to transvert from 20 to 2.

I would start with a 130MHz crystal oscillator or
a 43.333... oscillator and tripler, a couple of
SBL-1 DBM's and a fistful of transistors.

I hope your 20M rig covers 14 to 16 MHz, mine doesn't.

73, C U on 20M.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

575. Re: Really stoopid inductor question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 15:43:53 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <p74c2a.78t.ln@my.linux.box>
Source record: 47117

In article <Yfd28.381020$W8.14072775@bgtnsc04-news.ops.worldnet.att.net>, amdx wrote:
> The Amidon book says that core has an A sub L of 450uh per 100 turns

The 97 Cirkit catalogue says the same: 100 turns = 450 microHenries.

> Using the formula L in uh= A sub L x N sqr / 10,000
>
> L= 450 x 39 x 39 / 10,000
> L = 684450 / 10,000
> L = 68.45uh
>
> The Amidon book also says that a 40 turn T-80-26 inductor is 72uh.
> Mike

Sounds right.

I had forgotten the formula but the turns ratio is 100/39 = 2.564.
2.564 squared = 6.574. 450 / 6.574 = 68.45 microHenries.

Ah! the same as your figure.

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

576. Re: Need data for 6AQ5/6V6 (to be used in a shunt regulator)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 18:05:38 UTC
From: Your Friend Bill <"Remove The NO In The Reply To Address"@coqui.net>
Message-ID: <3C49B572.B7669B8F@coqui.net>
Source record: 47118

J M Noeding wrote:

> >AVERAGE current on a triode connected 6AQ5 in that voltage configuration
> >is shown on a graph in the RCA manual as about 35ma. Does that help?
> >The 6V6 listing says to refer to 6AQ5.
> >-Bill
>
> Tnx
>
> Never knew such manual existed, but suspected it. Seems that I can use
> this device. What is grid voltage for 10mA a+g2 current @90V and what
> is the grid cutoff voltage (zero anode current) on 120V ?
>
> Once used 6AQ5/6005/EL90 as a screen voltage regulator, but believe
> 6BQ5/EL84 is better because it has lower grid voltage swing from zero
> to 40mA current with 150-300V anode/g2 voltage
>
> 73
> LA8AK

I'm sending you a copy of the curve chart via private email.
Yes, the RCA Receiving Tube Manual is a common reference on this side of the pond. There aren't curve charts for every tube, but most common tubes are at least represented with specs. I'd suggest buying a couple of copies. The book came out every couple of years and I find by having, say, three copies - one each from about 1940, 1950 and 1960, that everything is well covered.
You can find them quite easily...ebay always has them. Not scarce like your EU Telefunken tube manuals. US$ 5-10 range is typical.

-Bill WX4A

577. Re: Locator square formula's

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 18:07:38 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3C49B5EA.E87B7F2@oda.com.au>
Source record: 47119

Scheveneels wrote:
>
> Hello all,
>
> I am looking for some formula's to make a computer program
> wich turns my antenna's automatically.
>
> the purpose of the program :
>
> If I start a QSO with another station , I simply fill in his locator
> in my program , and the antenna's must turn in his direction
> automatically.
>
> What I allready have :
>
> I can convert the regular squares into degrees and minutes, so when I
> fill in a locator, I know the other station's coï¿½rdinates .
>
> What the problem is :
>
> Now I have my coï¿½rdinates , and the other station's coï¿½rdinates ,
> but how can I calculate the angle (the azimuth for the antenna's to
> turn to) between these two places ??
> Does anyone knows some formula's or interesting sites to find out ?
> or maybe anybody who has experiiï¿½nce with this kind of programs
> who can help me on my way ...
>

Kevin, it depends how accurate you want to be. For the purpose you set out, great circle calculations based on a sperical globe will generally suffice.

Here is an extract from a perl script that I wrote. I contains the algorithms that you are seeking. Perl is C like to an extent, hope it helps. Some functions may be defined elsewhere in the script, but the solution to them is trivial. These algorithms are well known.

This code also calculates the other stations's bearing to your station, which is not simply 180 deg different to the outbound bearing, although the difference is only small generally (depends on relative position of the two stations and can be large in the polar regions if you intended working there!).

```
#notes
#all angular measures are signed
```

```
#$latd, $latm are the latitude deg, min
#$lond, $lonm are the longitude deg, min
#$base???r are your lat/lon in radians

#convert lat and lon to radians
$latr=dms2r($latd,$latm);
$lonr=dms2r($lond,$lonm);

if($baselatr!=$latr || $baselonr!=$lonr){

#calculate the angle subtended

$distr=atan2(((sin($baselatr)*sin($latr)+cos($baselatr)*cos($latr)*cos($baselonr-$lonr))**
-2-1)**0.5,1);

#calculate the chord line in Km
$dist=1.852*60*180/$pi*$distr;

#calculate the bearing to

$bto=acos(((sin($latr)-sin($baselatr)*cos($distr))/(sin($distr)*cos($baselatr))));
$bto=180/$pi*(sin($lonr-$baselonr)<0?2*$pi-$bto:$bto)%360;
$xx=$bto;

#calculate the bearing from

$bfm=acos(((sin($baselatr)-sin($latr)*cos($distr))/(sin($distr)*cos($latr))));
$bfm=180/$pi*(sin($baselonr-$lonr)<0?2*$pi-$bfm:$bfm)%360;
}
```

578. Ferrite Core Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 19:35:18 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <WTj28.109692$fe1.1849902@bgtnsc06-news.ops.worldnet.att.net>
Source record: 47120

is there a way to determine if the ferrite cores that i have are #43
material?

579. Re: Ferrite Core Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 20:44:57 UTC
From: Eike Lantzsch <eikelan@gmx.net>
Message-ID: <slrna4jmm5.b3k.eikelan@ID-77364.user.dfncis.de>
Source record: 47121

marvin rosen wrote:
> is there a way to determine if the ferrite cores that i have are #43
> material?
>
>

Other than measuring? No - but:
On http://www.bytemark.com/amidon/content2.htm
you can find the characteristics you are looking for.
Then just make some 20 turns onto the core and measure the inductivity,
also measure the dimensions of the core. Next wade through above
mentioned material and look for the AL value. That is for 100 turns
of course. You need to calculate a little bit. The calculation can be
found in one of the threads down from here in the same group.
You can, of course make 100 turns - it's just time consuming...
Not all unknown cores are made by Amidon though but this will give
you an idea of what you have.
To measure the whole characteristics of a core you will need to
set up a test circuit and connect to a sweep generator and oscope.
Well, that's an ordeal which was described in UKW-Berichte 2/93 pages 71
to 58 and VHF-Communications 4/94 pages 93-109 sorry no web page
you might have to order a copy.
Look at http://www.vhfcomm.co.uk/vindxPage42.html

Hope this helps

Regards, Ike
--
. . Eike Lantzsch ZP6CGE
<___> CdC 1519 ASUNCION PY
____|\|\ ____ .ooo../ www.geocities.com/cgelantzsch/index.html
_________\ _____/ rattle, aim, sting, wait, incorporate

580. Re: Does FM Skip????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 20:46:01 UTC
From: Jerry Oxendine <joxendi@bellsouth.net>
Message-ID: <%5l28.17413$Y17.1292437@e3500-atl2.usenetserver.com>
Source record: 47123

Sure, a bumblebee can fly! He just has to redline his engine all the time!
LOL!

Jerry
K4KWH

Roy Lewallen <w7el@eznec.com> wrote in message
news:3C439890.2FF0BB53@eznec.com...
> Strictly as Bob said it, I agree completely. That is, if theory doesn't
> agree with how something actually works, the theory is wrong,
> incomplete, or otherwise inadequate. But we do have to be careful to
> distinguish between how something actually works and how it appears to
> work. I remember from my technician days that careless measurements
> would often seemingly refute Ohm's or Kirchoff's laws, and that a
> surprising number of technicians were ready to abandon these laws on the
> basis of the bum measurements. Likewise, there are a bunch of
> imaginative antenna marketeers out there who measure impossible gains in
> their back yards, and invent new antenna theory to explain it. (I
> publicly offered to one of them to pay the cost of a professionally done
> test at a certified site if the test showed that the antenna met the
> claims he was making for it. Do you suppose he accepted?)
>
> Although plenty of theory has been proved wrong over the years, it's not
> every day that principles which have stood for a hundred years are
> overturned. And it's even more rare for them to be overturned (these
> days) by back yard tinkerers. So when established theory doesn't match
> the measurements, first make sure you're applying the theory correctly.
> Then be damned certain of your measurements before you even think about
> abandoning the theory. Then if you're really certain that your
> measurements are good and they refute established theory, dust off the
> word processor, write a paper, and get ready for fame and recognition.
>
> It's a whole lot easier to tell that a bumblebee can fly than it is to
> tell what the gain of an antenna is.
>
> Roy Lewallen, W7EL
>
> Mike Andrews wrote:
> >
> > "Bob Lewis \(AA4PB\)" <rlewis@staffnet.com> wrote:
> > :> While many times if you look at the pure theory of how things work,
> > : it
> > :> does not always do that is practice.
> >
> > : Any time practice doesn't follow the theory then the theory is wrong

> > : because we don't completely understand the physics involved. There
> > : have been plenty of theory proved wrong over the years.
> >
> > Exactly so. Someone in the 19th century "proved" that a bumblebee
> > couldn't fly. According to his model, that is. His model assumed
> > that the bumblebee's wings were stationary.
> >
> > Others have since noted that a bumblebee _does_ fly, and that a
> > bumblebee's wings move.
> >
> > --
> > I had NANAE and ASR mixed up - I thought NANAE was the place
> > where Useful Information is not allowed. I've not seen much of it
> > here lately. -- Steve Sobol, in NANAE

581. Re: Salvage Parts from a Microwave ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 20:54:10 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <nrm28.45349$Hg7.5107317@news11-gui.server.ntli.net>
Source record: 47129

```
>
> The family microwave burnt up today. Fire extinguished with
standard
> ABC-type device. Looks like the magnetron burned through into the little
plastic
> piece that covers it. Alas ! Any parts worth salvaging before I pitch
it??
==========
Components worth salvaging ...
1) Fine mesh screen in door (excellent for RF screening)
2) High Voltage diode
3) High voltage capacitor
4) Hi Temperature Sleeve insulation low voltage winding transformer + copper
wire
5) Hi Voltage 2 button toggle switch (often seen in older models ) I have
one rated 2600 V
6) Rotating glass plate (if fitted)
7) (Self tapping) Screws ,bolts & nuts
8) Power plug and cord
9) Any components ,being part of display unit

Note : this topic was extensively discussed on this NG abt 4 - 6 months ago.

Frank gm0csz.kn6wh@ntlworld.com
```

582. AES Kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 20:54:43 UTC
From: bill hennessy <hennessy@281.com>
Message-ID: <n2l28.968$L73.517268@paloalto-snr1.gtei.net>
Source record: 47122

Antique electronic supply has come out with a new kit. It's a 2 tube regenerative radio. Has any one made this Kit? If so E-mail me and tell me what you think of it.

Bill, N5NOB

583. WTB:Transverters UHF/VHF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 21:10:09 UTC
From: Handi Ham <okiemansc@yahoo.com>
Message-ID: <Rgl28.8225$OS5.680528@newsread1.prod.itd.earthlink.net>
Source record: 47124
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

Interested in transverters for 222 and above.Homebrew/projects ok.

584. Re: Looking for a resistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 21:18:16 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <orm28.45350$Hg7.5106993@news11-gui.server.ntli.net>
Source record: 47130

> I am looking for a power resistor, 20 W, 8000 ohms. It is tubular, with
> radial leads. 0.6 inches diameter, about 2.4 inches long. I believe it
> was manufactured by IRC. It is the cement kind.
>
> I have looked everywhere, Surplus sales, Dans, Ocean State, Debco....
>
> Any clues?
==========
As an alternative you could use 8 ea 1000 Ohms ,3 Watts in series or 4 ea
2000 Ohms ,5W in series , of course space permitting.
Multiple resistors dissipate total heat much better than a single resistor .
Also the total cost will be less if you use standard resistors instead of
one-off specials.

Frank gm0csz.kn6wh@ntlworld.com

585. Re: Need data for 6AQ5/6V6 (to be used in a shunt regulator)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 21:33:40 UTC
From: la8ak.xnd@online.no
Message-ID: <3c49cc77.441332406@news.online.no>
Source record: 47125

On Sat, 19 Jan 2002 10:33:19 -0300, Eike Lantzsch <eikelan@gmx.net>
wrote:

>
>You might also want to ask for help over there --> rec.audio.tubes
>Some pretty savvy and helpfull guys are around there.
>
Yes, I am aware of possibility to get answers about tube type
equipment there, also got replies for signal generators which you
would have expected from other NG's or newsreflectors

But some questions have been asked many times and every time I
received a lot of replies which had little to do with the question, so
as you see the other reply is the first I ever got from a person who
knows more than currents on 250v plate and screen voltages - when I
asked for 100V parameters

Also asked for product detectors in communication receivers, and rec'd
lot of mails and comments about 12kHz balanced modulators invented in
1918 using selenium or dry-diodes which could not pass anything higher
than 30kHz.... and has never been used in communication receivers

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

586. DDDS BOARDS..NOVA TECH..QUALCOM chips..ANY ONE HAVE??-anyonebuiltone???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 21:34:32 UTC
From: ve3ab@mondenet.ca
Message-ID: <3c49e5ca.392365454@news.mondenet.com>
Source record: 47127

I have 4 of the NOVATECH boards model DDDS
Synthesizer..they use QUALCOMM chips..probably now
discontinued from manufacture..Anyone help with anyof these chips??
Anyone built one of these UNITS?? Id be interested in hearing from
you. If I can get the parts..Ill build at least one..Earl VE3AB

587. Re: Homebrew Construction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 21:41:13 UTC
From: Peter Goodwin <pgood@xtra.co.nz>
Message-ID: <bJI28.527$Lv.76440@news.xtra.co.nz>
Source record: 47126
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.components,sci.electronics.design,sci.electronics.misc,uk.radio.amateur

I just had a look at the New Jersey QRP website. They are selling a tool
which makes round pads for $9.

"Lizard Blizzard" <NOSPAM@rsccd.org> wrote in message
news:3C473CA0.D11B98D8@rsccd.org...
> ADVERTISEMENT!!
>
> pentode wrote:
> >
> > If you are into homebrew radio/electronics construction,
> > you may find the following URL interesting:
> > www.copperisland.biz

588. WTB: Triad M-15 Modulation transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 22:09:41 UTC
From: Chuck O'Neal <coneal@ultranet.com>
Message-ID: <a2cqu1ced1@bob.news.rcn.net>
Source record: 47128
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Anyone have one available? Good $$$ reward paid for one!
73,
Chuck...K1KW

589. Re: ARNewsline 1275 - Jan 18 2002

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 22:20:29 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <qrm28.45351$Hg7.5106806@news11-gui.server.ntli.net>
Source record: 47131

>
> The Radio Licensing Center reports that, as of the 7th of January, exactly
600
> of the new M3 Foundation Licenses had been issued.
>
> In the 'QSO Party' for Foundation Licensees that took place on the 1st of
> January it is estimated that about 100 M3 stations were active. Many
joined the
> one-minute-past-midnight 80-meter net and many more were heard working DX
> during the subsequent days.
>
> One person active on the 1st of January was Mike Marsden, M3BQH, who also
holds
> the callsign G8BQH. Mike reports that he worked Alex, UR5EDU, in the
Ukraine at
> two seconds past midnight, using 10 watts on 40 meters. The report was
59+10dB.
> After a few hours' sleep M3BQH worked 66 stations on the first day, with
only
> two short CQ calls.
>
> "The pile-up queue was never ending, I even managed to work seven other
M3s",
> Mike said.
>
> Jeramy Boot, G4NJH
>
> --
>
> To put this in perspective. The UK has 57,814 hams so 600 is about 1%.
Here
> in the United States we have close to 625,000 licensees. That?Ts the
> equivalent of getting 6250 hams signing up for a new license class here in
the
> USA in only a few short days. (GB2RS)
==========
Readers should realise that most if not all of the licensees with a M3 callsign already had a UK B class licence (equivalent to the US technician class licence) enabling them to operate in Ham bands above 30 MHz .They obtained a Foundation Licence callsign following a morse assessment (not to be confused with the 5 wpm morse test). The morse assessment is expected to be the last mandatory requirement in the UK for access to the HF bands before knowledge or morse will no longer be required following WARC 2003 .

The Radio Communication Agency (British FCC) has come to the conclusion that
WARC 2003 will highly likely decide to abolish the 'morse requirement' for
access to the HF bands by radio amateurs.
A very positive move indeed ,to stimulate the hobby of amateur radio
.....eventually amateur radio has moved into the 21st Century . The
10 Watts max RF power will also stimulate QRP operation.

Even if in the highly unlikely event the morse requirement would be retained
,the UK morse assessment complies with current ITU regulations.

We now can finally move forward and allow all to enjoy the hobby to the full
,including the cw operators !

Frank gm0csz.kn6wh@ntlworld.com

590. Avantek Part number

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 22:30:32 UTC
From: "Harold E. Johnson" <W4ZCB@Home.com>
Message-ID: <csm28.7371$Pj4.964074@news2.nash1.tn.home.com>
Source record: 47132

Anyone with an old Avantek catalog that could identify a MMIC

SMA86-10102 please?

Mni Tnx

W4ZCB

591. Re: Really stoopid inductor question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 22:41:25 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <a2csmk$21c$1@helle.btinternet.com>
Source record: 47133

"Leon Heller" <leon_heller@hotmail.com> wrote in message
news:a2bbktcag1@paris.btinternet.com...
>
> "Your Friend Bill" <"Remove The NO In The Reply To Address"@coqui.net>
wrote
> in message news:3C48CAC5.59FA0DCB@coqui.net...
> > "Clifton T. Sharp Jr." wrote:
> > >
> > > This must not be my day. I'll spare you the details, but various means
> of
> > > trying to figure the inductance of this coil have gotten me answers
> ranging
> > > from 7 uH to 22,815 uH. Someone hand me a fish, please. T-80-26 core,
> > > 39 turns of #20 wire.
> >
> > Call it 136uh.
>
> I make it 136 uH as well, in case Clifton needs a second opinion.

He must have given the wrong Al value.

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.con
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

592. QST contra-wound inductor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 22:52:26 UTC
From: amdx <amdx@att.net>
Message-ID: <KMm28.109886$fe1.1867156@bgtnsc06-news.ops.worldnet.att.net>
Source record: 47134

In the Feb 2002 QST the article on matching short antennas
refers to a contra-wound toroidal air core inductor as being
a method to get very high Q. I've looked for more info, all
I can find is the CTHA antenna.
Is the CTHA the same winding method the author refers
to (contra-wound)?
Wouldn't a contra-wound inductor have zero inductance?

593. Re: Really stoopid inductor question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 22:56:02 UTC
From: Your Friend Bill <"Remove The NO In The Reply To Address"@coqui.net>
Message-ID: <3C49F982.C37AB7A4@coqui.net>
Source record: 47135

```
Leon Heller wrote:
>
> "Leon Heller" <leon_heller@hotmail.com> wrote in message
> news:a2bbkt$cag$1@paris.btinternet.com...
> >
> > "Your Friend Bill" <"Remove The NO In The Reply To Address"@coqui.net>
> wrote
> > in message news:3C48CAC5.59FA0DCB@coqui.net...
> > > "Clifton T. Sharp Jr." wrote:
> > > >
> > > > This must not be my day. I'll spare you the details, but various means
> > of
> > > > trying to figure the inductance of this coil have gotten me answers
> > ranging
> > > > from 7 uH to 22,815 uH. Someone hand me a fish, please. T-80-26 core,
> > > > 39 turns of #20 wire.
> > >
> > > Call it 136uh.
> >
> > I make it 136 uH as well, in case Clifton needs a second opinion.
>
> He must have given the wrong Al value.
>
> Leon

This page gives an Al of 895.
http://www.oselectronics.com/ose_p51.htm
-bILL
```

594. Re: Need data for 6AQ5/6V6 (to be used in a shunt regulator)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-19 23:17:12 UTC
From: Eike Lantzsch <eikelan@gmx.net>
Message-ID: <slrna4jvjo.bfh.eikelan@ID-77364.user.dfncis.de>
Source record: 47136

J M Noeding wrote:
> On Sat, 19 Jan 2002 10:33:19 -0300, Eike Lantzsch <eikelan@gmx.net>
> wrote:
>
[snip]
> Also asked for product detectors in communication receivers, and rec'd
> lot of mails and comments about 12kHz balanced modulators invented in
> 1918 using selenium or dry-diodes which could not pass anything higher
> than 30kHz.... and has never been used in communication receivers
>
I seeeee ;-))

Regards, Ike

595. FA: Collins 455 kHz, 6 kHz, AM filter - 75S-3B/C

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 00:02:56 UTC
From: K6SDE <nospam@no.spam>
Message-ID: <3C4A0959.3458EB6B@no.spam>
Source record: 47137

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1324604035

or
AM Collins Filter

Tested in my receiver. Works great. Not many around these
days.

K6SDE

596. Re: 2m drive to 20m transverter anyone?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 00:08:40 UTC
From: la8ak.xnd@online.no
Message-ID: <3c49f208.450951117@news.online.no>
Source record: 47138

On Sat, 19 Jan 2002 11:56:01 GMT, mike@corn2.freeserve.co.uk (Mike W)
wrote:

>HI Folks, I'm looking for inspiration and existing designs for a 2m to
>20m transverter, similar to the Tokyo MX-240.
>any ideas?.
>cheers Mike W, G8NXD, M3MSM

10-15 years ago it was a construction described with PCB available
from VHF communications for 144 to 28MHz, but 20m is much easier and
the few coils could be easily calculated

73
LA8AK
--
remove ,xnd to reply

597. Re: Need data for 6AQ5/6V6 (to be used in a shunt regulator)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 00:08:42 UTC
From: la8ak.xnd@online.no
Message-ID: <3c4a098d.456972600@news.online.no>
Source record: 47139

On Sat, 19 Jan 2002 14:05:38 -0400, Your Friend Bill <"Remove The NO
In The Reply To Address"@coqui.net> wrote:

>
>I'm sending you a copy of the curve chart via private email.
>Yes, the RCA Receiving Tube Manual is a common reference on this side of
>the pond. There aren't curve charts for every tube, but most common
>tubes are at least represented with specs. I'd suggest buying a couple
>of copies. The book came out every couple of years and I find by
>having, say, three copies - one each from about 1940, 1950 and 1960,
>that everything is well covered.
>You can find them quite easily...ebay always has them. Not scarce like
>your EU Telefunken tube manuals. US$ 5-10 range is typical.
>
>-Bill WX4A
>
thanks for the jpg file, I learned that 6AQ5 seems to be the best
solution to my shunt type regulator

73,
Jan-Martin
LA8AK
--
remove ,xnd to reply

598. Re: How to get low freq quadrature signals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 00:20:18 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c4a0c8a$0$13312@echo-01.iinet.net.au>
Source record: 47140

While this is a fairly difficult spec, I dont think it is impossible
A polyphase network could achieve one and one half decades of accurate phase shift (say 1 degree) with passive components and say 8 poles. We were able to do this to give a useful bandwidth from 300Hz to 8KHz which is roughly equivalent in span to 5KHz to 150KHz. The network is quite tolerant of error so 5% components would probably be OK. Set R=Xc at each pole spaced logarithmically over the band of interest.
Pole Freq

Fp=1/2*PI*RC

You should terminate the network with a high impedance (say voltage follower) and drive it with differential inputs.
The down side is component count (8 per pole) and loss (25dB or so). Also out of band signals should be prefiltered as they are less attenuated than in band.

See Elelctronics and Wireless World March 1994

Richard

"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message news:a1nrs7sos1@slb7.atl.mindspring.net...
> Deyoreo:
>
> [snip]
> <deyoreo@re.ray.com> wrote in message
> news:3c3eeaf1.4670921@proxy.res.ray.com...
> > Sorry, I didn't mention this is an analog signal 5 - 160 Khz.
> > On Thu, 10 Jan 2002 14:26:41 GMT, deyoreo@re.ray.com wrote:
> >
> > >I need a device that I can input 5 Khz - 150 Khz and output 2
> > >quadrature signals. Anyone know of such a device?
> [snip]
>
> The "device" of which you speak, is called a wideband 90 degree phase
> splitting network. a.k.a. Hilbert Transformer.
>
> In theory such a "perfect" device is impossible to implement precisely since
> it implies a certain non-physicality. However for enough money one can
> approach the ideal phase splitter closely.
>
> An approximation to the 90 degree phase separation can be achieved within
> specified error tolerances... e.g. phase separation of 90 degrees +/- and
> error of epsilon degrees, over any band of interest. The "cost" of such

> devices goes up *very* quickly as epsilon approaches zero, and as the
> bandwidth becomes wider! The looser the phase deviation spec and the
> narrower the band over which you want matching the better off you are!
>
> You have not given any specifications in your posting on the degree of
> matching required over your band. But... I can say that your desired
> bandwidth, 5 - 150kHz is within the realm of possibilities with today's
> technologies, however, it is on the *extremely* wide side, in terms of
> relative bandwidths, for such devices. In other words, you'r probably not
> talking amateur $$$, but professional stuff because of the prices...
>
> Unfortunately... there are no such devices, that I am aware of, which are
> "ready-made" for your frequency range. In fact most of the commercial
> off-the-shelf phase splitting devices, which were generally simple but
> precision matched R-C networks for voice-band/SSB generator applications,
> went out of prodcution many years ago, e.g. B&W, etc...
>
> It is possible to design and build such a device, but... that is a
> non-trivial exercise, and definitely requires computer aided design tools,
> which are not widely available since there is so little call for such an
> application!
>
> Since you have not elaborated on your problem, I will assume that you are
> looking at one of two scenarios...
>
> A completely analog phase splitter, or a completely digital phase splitter
>
> The latter means that you have already assumed/underwritten, all the costs
> of A/D converters, etc... if so then there may be some hope in coding your
> own DSP algorithm for a wideband Hilbert Transformer.
>
> It's probably easier for a non-specialist, who is a DSP jockey, to design
> and implement a "digital" phase splitting device, known to the DSP filter
> guru's as a Hilbert Transformer, since Hilbert Transformers have well
known
> DSP implementations, that can almost be "transplanted" into a programmable
> DSP engine. However if you are seeking accuracy of less than 1 degree
peak
> to peak error across that 5 - 150 Khz band, the floating point MIP's that
> such a DSP algorithm will chew up will most likely dwarf the rest of your
> application. Count the cycles and check it out before committing!
>
> If you are after an analog device, well I am afraid that... you are in for
> an even tougher time... The design of precise wide band analog phase
> splitters is almost a black art (Such a design involves first solving
> mathematical approximation problem using very advanced optimization
> techniques, and then the implementation requires advanced network
synthesis
> techniques to implemtent accurate high order matched all-pass networks,
> either passive or active implementations, using all-pass LC lattice

> networks, or active RC all-pass networks.) In my experience I have only
> ever seen such networks developed for advanced surveilance radar video
> applications, and for advanced passive sonar front end applications, both
of
> which were/are related to military sensing technology. Not cheap! Such
> technologies and methodologies are known only to a very few practicioners
> around the world, and they have developed their own proprietary computer
> aided design tools to do so, for one or two military sponsored programs.
> And so... unless you have big bucks to spend... and know who/where to
> consult with, you'r probably out of luck. You'l have to do it yourself.
>
> And so... unless your design has *very very very* lax specifications on
> phase accuracy... I am afraid to say that your project might be out of
> reach.
>
> Sorry,
>
> --Peter K1PO
> --Cary, NC
>
>

599. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 02:29:49 UTC
From: Gary Schafer <gschafer@mediaone.net>
Message-ID: <3C4A2AF9.7E75C6B6@mediaone.net>
Source record: 47141
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

"Carl R. Stevenson" wrote:

> "William E. Sabin" <sabinw@mwci.net> wrote in message
> news:3C404F5C.6040901@mwci.net...
> > Carl R. Stevenson wrote:
> >
> > > The entire issue of opposite sideband rejection can be
> > > rendered rather moot, if one uses the "Weaver" or "3rd
> > > method" of generating SSB, which is a variation on the
> > > phasing scheme.
> >
> >
> > This is true only if the two required lowpass
> > filters are ideal boxcar FIR filters, which is the
> > same as the requirement for conventional SSB using
> > the phasing method. The Weaver method is no
> > panacea either.
> >
> > Bill W0IYH
>
> Bill,
>
> But of course ... but in DSP, they can be very nearly
> ideal, with the result that out of channel emissions
> can be VERY low because of what I said about the
> undesired sideband and the desired occupying the
> same frequencies centered about the (suppressed)
> carrier, which is at channel center.
>
> Carl - wa6vse

If I remember correctly the 2nd harmonic products of the wanted side band show up as unwanted side band products in the unwanted side band and because they occupy the same spectrum they show up and interfere with the wanted side band.

73
Gary K4FMX

600. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 02:47:20 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <a2db49udv1@slb7.atl.mindspring.net>
Source record: 47142
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

It seems to me that a DSP ought to be able to take the audio waveform and use a DDS to generate the actual SSB output signal and dispose of filter and mixers and carriers for that matter.

Of course, there is the minor problem of spurs on the DDS and also the upper frequency limit of a DSP system used in this fashion.... Still, I wonder what the performance would be, spur level and frequency limit.

I have no way to judge, since I have little experience in this, but I am interested in seeing if anyone in the group might be able answer.

Thanks,

Jim Pennell
N6BIU

601. Re: Salvage Parts from a Microwave ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 04:37:22 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c4a4370.136071254@news.erols.com>
Source record: 47143

On Sat, 19 Jan 2002 20:54:10 -0000, "Frank Dinger" <gm0csz.kn6wh@ntlworld.com>
wrote:

>
>>
>> The family microwave burnt up today. Fire extinguished with
>standard
>> ABC-type device. Looks like the magnetron burned through into the little
>plastic
>> piece that covers it. Alas ! Any parts worth salvaging before I pitch
>it??
>==========
>Components worth salvaging ...
>1) Fine mesh screen in door (excellent for RF screening)
>2) High Voltage diode
>3) High voltage capacitor
>4) Hi Temperature Sleeve insulation low voltage winding transformer + copper
>wire
>5) Hi Voltage 2 button toggle switch (often seen in older models) I have
>one rated 2600 V
>6) Rotating glass plate (if fitted)
>7) (Self tapping) Screws ,bolts & nuts
>8) Power plug and cord
>9) Any components ,being part of display unit
>
>Note : this topic was extensively discussed on this NG abt 4 - 6 months ago.
>
>Frank gm0csz.kn6wh@ntlworld.com
>
>

Thx., Frank. I did try to use Google to research before posting. However, I
found tons of questions regarding some older mag. article re: Microwave oven
to Microwave Transmitter conversion --- none on salvaging.

Negative on the HV toggle-switch. As for the rotating motor with fitted
plate- salvaged and perhaps they can be used to display my next project
on a rotating pedestal -- Hi, Hi. It's rated at 120/60/2.8 and goes at 3rpm
so maybe I could just plug it in the wall and set my beer and nuts on it:
Drink/chomp/Drink/chomp. I like challenges.

73 de KG4JBM

>
>
>

Reticulum

Remove "your.hat" when replying via e-mail

602. Another Inductor Question: With a "Twist"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 04:59:48 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c4a49a0.137655093@news.erols.com>
Source record: 47144

Greetings All,

My question I know has been asked numerous times, but perhaps
not quite like this. I do have the ARRL Handbook, so if the answer
is staring me in the face in there please be patient and point me in
the right direction.

Basically, I want a formula to calculate predicted resonant freq.
of any coil. The usage here is for a crystal set. However, the twist
is I'd like to play with making the basic coil of the tank circuit into
a ** variometer**. This implies to me two different coil diameters,
one nestled inside the other, and wired in series. Assume just that
I need the minimum and maximum inductance.

In short, given a "target" freq. (or freq. range) how to figure the
coil dimensions,etc. for a variometer to use to resonant as needed?
I recognize that the communtative property,etc. may allow a large
possible number of coil " combinations ". Just need some sort of
equation to get started. Hope this makes sense.

Andrew
Reticulum

Remove "your.hat" when replying via e-mail

603. Re: Another Inductor Question: With a "Twist"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 07:51:24 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <a2dstn$cd5$1@slb1.atl.mindspring.net>
Source record: 47145

Reticulum:

As you no doubt have already come to appreciate, the "Variometer" is a series connection of two inductors, call them L1 and L2, whose orientation can be varied by rotating one within the other such that the mutual coupling between the two can be varied all the way from completely opposing flux linkages to completely aiding flux linkages.

If the M is the mutual inductance between the two inductors L1 and L2, and if they are closely coupled, i.e. the coupling coefficient k is close to unity, the coupling coefficient k is given by k = M/sqrt(L1*L2), then the total inductance you can achieve ranges all the way from Lmin = L1 + L2 - 2M when the flux linkages are opposing each other up to Lmax = L1 + L2 + 2M when the flux linkages are completely aiding each other, which is almost a range of zero to four times the inductance of one of the coils.

In the usual Variometer one tries to get as close coupling as possible to make k very close to unity over a wide range of motion, so that in practice the two inductors will be very nearly identical in inductance, shape, etc... of course one is slightly smaller than the other, etc to allow one to move/rotate within the other, but....

Practically the best design for a variometer will try to achieve k close to one, usually this results in all of the inductances being practically equal to each other. i.e. L1 = L2 = M = L and then since k is close to 1 over some of the range of motion, the inductance range of a Variometer can be varied approximately from Lmin ~ 0 to Lmax ~ 4L, where L is the inductance of any of the two inductors.

Pretty neat for a variable inductor with no taps, no rollers, no shorted turns, no... etc... eh.

I've often wondered how big a Variometer would be needed to make a good "T-tuner" using today's HF C-L-C high pass tuner circuits, with the Variometer replacing the roller inductor or the tapped inductor. Maybe not as compact as the MFJ/Ameritron/Nye tuners, but I'd bet it looks a lot neater/nerdier, heh, heh...

In theory, theory and practice are the same, but in practice they are different, and so... you will enccounter "end-effects" and other such Murphy-isms that you cannot determine accurately until you build your Variometer and test it.

I'd start by designing one coil to a specific inductance in the range of 1/4 of what your maximum inductance objective is, and then make the second with almost identical inductance but slightly smaller to fit inside the first one.

Let us know how you do...

Best,

--Peter K1PO

"Reticulum" <Cathexis@yourhaterols.com> wrote in message
news:3c4a49a0.137655093@news.erols.com...
> Greetings All,
>
> My question I know has been asked numerous times, but perhaps
> not quite like this. I do have the ARRL Handbook, so if the answer
> is staring me in the face in there please be patient and point me in
> the right direction.
>
> Basically, I want a formula to calculate predicted resonant freq.
> of any coil. The usage here is for a crystal set. However, the twist
> is I'd like to play with making the basic coil of the tank circuit into
> a ** variometer**. This implies to me two different coil diameters,
> one nestled inside the other, and wired in series. Assume just that
> I need the minimum and maximum inductance.
>
> In short, given a "target" freq. (or freq. range) how to figure the
> coil dimensions,etc. for a variometer to use to resonant as needed?
> I recognize that the communtative property,etc. may allow a large
> possible number of coil " combinations ". Just need some sort of
> equation to get started. Hope this makes sense.
>
> Andrew
> Reticulum
>
> Remove "your.hat" when replying via e-mail

604. Re: Another Inductor Question: With a "Twist"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 07:54:17 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a2e0nr$1099ab$1@ID-124126.news.dfncis.de>
Source record: 47146

Download program SOLNOID2 to design two coils, one of which slides nicely inside the other. Make the coils formers of equal length. Use same gauge wire for both coils.

Inductances = L1 and L2 microhenrys. L1 will not be very different from L2.

When connected in series but disassociated with each other, inductance = L1 + L2.

When series aiding, and one coil is entirely within the other, the inductance (for crystal-set purposes) = 2*(L1 + L2)

which is only twice as big so the frequency range with a fixed capacitor will be only 1.4-to-1 or less.

With series opposing coils the inductance can be reduced to zero but Q with small inductances will be very poor.

****
Regards, Reg G4FGQ
Free Radio Modelling Programs
Http://www.g4fgq.com
****

Reticulum <Cathexis@yourhaterols.com> wrote in message news:3c4a49a0.137655093@news.erols.com...
> Greetings All,
>
> My question I know has been asked numerous times, but perhaps
> not quite like this. I do have the ARRL Handbook, so if the answer
> is staring me in the face in there please be patient and point me in
> the right direction.
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> Basically, I want a formula to calculate predicted resonant freq.
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> one nestled inside the other, and wired in series. Assume just that
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> In short, given a "target" freq. (or freq. range) how to figure the
> coil dimensions,etc. for a variometer to use to resonant as needed?
> I recognize that the communtative property,etc. may allow a large
> possible number of coil " combinations ". Just need some sort of
> equation to get started. Hope this makes sense.

>
> Andrew
> Reticulum
>
> Remove "your.hat" when replying via e-mail

605. Tube type Electronic TR Switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 09:37:20 UTC
From: mankind@aol.com
Message-ID: <919C212B7mankindaolcom@68.39.105.157>
Source record: 46997

Does anyone have the ARRL Hints & Kinks book from 1968 or 1969 ? I need the schematic for the electronic T/R switch. I build one back in the 70s and it worked great for QSK operation.

--
73 !

John :)

606. Re: Another Inductor Question: With a "Twist"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 13:22:20 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a2etfe$10lps5$1@ID-124126.news.dfncis.de>
Source record: 47005

Variometers with opposing coils would have a terrible performance in transmitting antenna tuners. Inductance decreases to near zero but wire resistance remains at the same high value as when coils are aiding each other.

Q = Omega*L/R

OK for crystal sets if near the transmitter.

Reg.

607. Re: Another Inductor Question: With a "Twist"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 14:23:19 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <qxA28.50707$Hg7.5525285@news11-gui.server.ntli.net>
Source record: 46998

> As you no doubt have already come to appreciate, the "Variometer" is a
> series connection of two inductors, call them L1 and L2, whose orientation
> can be varied by rotating one within the other such that the mutual
coupling
> between the two can be varied all the way from completely opposing flux
> linkages to completely aiding flux linkages.
>
> If the M is the mutual inductance between the two inductors L1 and L2, and
> if they are closely coupled, i.e. the coupling coefficient k is close to
> unity, the coupling coefficient k is given by k = M/sqrt(L1*L2), then the
> total inductance you can achieve ranges all the way from Lmin = L1 + L2 -
2M
> when the flux linkages are opposing each other up to Lmax = L1 + L2 + 2M
> when the flux linkages are completely aiding each other, which is almost a
> range of zero to four times the inductance of one of the coils.
>
> In the usual Variometer one tries to get as close coupling as possible to
> make k very close to unity over a wide range of motion, so that in
practice
> the two inductors will be very nearly identical in inductance, shape,
etc...
> of course one is slightly smaller than the other, etc to allow one to
> move/rotate within the other, but....
>
> Practically the best design for a variometer will try to achieve k close
to
> one, usually this results in all of the inductances being practically
equal
> to each other. i.e. L1 = L2 = M = L and then since k is close to 1 over
> some of the range of motion, the inductance range of a Variometer can be
> varied approximately from Lmin ~ 0 to Lmax ~ 4L, where L is the inductance
> of any of the two inductors.
>
> Pretty neat for a variable inductor with no taps, no rollers, no shorted
> turns, no... etc... eh.
>
> I've often wondered how big a Variometer would be needed to make a good
> "T-tuner" using today's HF C-L-C high pass tuner circuits, with the
> Variometer replacing the roller inductor or the tapped inductor. Maybe
not
> as compact as the MFJ/Ameritron/Nye tuners, but I'd bet it looks a lot
> neater/nerdier, heh, heh...
>
> In theory, theory and practice are the same, but in practice they are

> different, and so... you will enccounter "end-effects" and other such
> Murphy-isms that you cannot determine accurately until you build your
> Variometer and test it.
>
> I'd start by designing one coil to a specific inductance in the range of
1/4
> of what your maximum inductance objective is, and then make the second
with
> almost identical inductance but slightly smaller to fit inside the first
> one.
==========
Peter , K1PO , Tnx vy much for your interesting contribution . I have 2
variometers ,
probably from a 2 MHz Marine transmitter. I'll include your note in my
filing system.

Tnx agn

Frank gm0csz.kn6wh@ntlworld.com

>
>
>
>
>
> "Reticulum" <Cathexis@yourhaterols.com> wrote in message
> news:3c4a49a0.137655093@news.erols.com...
> > Greetings All,
> >
> > My question I know has been asked numerous times, but perhaps
> > not quite like this. I do have the ARRL Handbook, so if the answer
> > is staring me in the face in there please be patient and point me in
> > the right direction.
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> > Basically, I want a formula to calculate predicted resonant freq.
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> > a ** variometer**. This implies to me two different coil diameters,
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> > I recognize that the communtative property,etc. may allow a large
> > possible number of coil " combinations ". Just need some sort of
> > equation to get started. Hope this makes sense.
> >
> > Andrew
> > Reticulum
> >
> > Remove "your.hat" when replying via e-mail

>
>

608. Re: Homebrew Construction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 14:30:30 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <txA28.50709$Hg7.5525223@news11-gui.server.ntli.net>
Source record: 46999
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.components,sci.electronics.design,sci.electronics.misc,uk.radio.amateur

"Peter Goodwin" <pgood@xtra.co.nz> wrote in message
news:bJl28.527$Lv.76440@news.xtra.co.nz...
> I just had a look at the New Jersey QRP website. They are selling a tool
> which makes round pads for $9.
==========
Just received the above type of tool through the UK G-QRP Club . Indeed an
excellent way for RF breadboarding
It even might be possible to use the tools for in situ soldering of
multi-legged ICs .
The pads (islands) cut with the tool have a circular copper area with a
diameter of 4mm (3/16 ") and an insulating ring
less than 1 mm (< 1/16") wide . It leaves the board with a maximum
groundplane and makes doublesided use a snip.
Effective homebrewing is now even more enjoyable.

Frank gm0csz.kn6wh@ntlworld.com

609. Re: Tube type Electronic TR Switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 14:39:36 UTC
From: la8ak.xnd@online.no
Message-ID: <3c4abd5c.503011129@news.online.no>
Source record: 47000

On Sun, 20 Jan 2002 09:37:20 GMT, mankind@aol.com (John_in_NJ) wrote:

>Does anyone have the ARRL Hints & Kinks book from 1968 or 1969 ? I need the
>schematic for the electronic T/R switch. I build one back in the 70s and it
>worked great for QSK operation.
>
>
>--
>73 !
>
>John :)

had it, but gave to a friend after 2 days,
believe the TR-switch was also shown in ARRL handbooks, also built
some. I suspect some might not be just as good as required for
solidstate receivers

--
remove ,xnd to reply

610. Re: Tube type Electronic TR Switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 15:50:49 UTC
From: Gary Glaenzer <nobulltrans@irtc.net>
Message-ID: <sHB28.376$j%6.23134365@news2.randori.com>
Source record: 47001

it's in the 64 Handbook

G

"John_in_NJ" <mankind@aol.com> wrote in message
news:919C212B7mankindaolcom@68.39.105.157...
> Does anyone have the ARRL Hints & Kinks book from 1968 or 1969 ? I need
the
> schematic for the electronic T/R switch. I build one back in the 70s and
it
> worked great for QSK operation.
>
>
> --
> 73 !
>
> John :)
>

611. Re: Tube type Electronic TR Switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 16:03:03 UTC
From: "G. Skiffington" <skiffing@nbnet.nb.ca>
Message-ID: <3C4B2071.116F@nbnet.nb.ca>
Source record: 47002

Howdy John.....I took the liberty of redrawing the schematic and construction info for the requested switch for you.....have it in .BMP format but your e-mail (return) is not good according to my ISP. I'd be glad to e-mail it to you otherwise.

73 - Gord VE1AJF

612. Re: High Voltage Arcing???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 16:43:46 UTC
From: Edward2001 <Edward2001@peoplepc.com>
Message-ID: <3C4AF3C2.8DD11EF2@peoplepc.com>
Source record: 47011

Thanks for all your suggestions and input. You've helped my thinking to be a little bit more focused and what to watch for.
Best regards,
Brian

spike wrote:

> On Fri, 18 Jan 2002 21:13:21 +0000, Edward2001
> <Edward2001@peoplepc.com> wrote:
>
> >Thanks for your input, Mike.
> >
> >From the relay contacts, about 30 feet of wire runs out to the filament
> >connections (using alligator clips to connect). When the tube arcs from the
> >anode to the filament, the high voltage runs back along these wires, into the
> >relay contacts. You will then see arcing between the relay contacts. What I want
> >to do, is stop this high voltage from getting back to the relay contacts. I'm
> >not sure the varistors, will handle this kind of energy.
> >
> >You mentioned a screen. Tell me more about this? What is the idea of this?
>
> 30' of wire....Oh my God ! I was thinking more of a self contained
> unit, with a fills transformer in the bottom, that the tubes could be
> plugged into, more like a normal valve.
>
> I would try and do away with the crok clips, and use something with
> less sharp edges, as they are almost certainly 'inviting' the arc. At
> the HT end too, use proper contacts with no sharp edges. The screen
> idea would be to have an earthed plate with 2 holes, just big enough
> to slide the tubes through, so that the plate was very near to the
> fillament end; the arc would be more likely to hit the plate than the
> fills conections.
>
> I don't really know much about zoms except that most mainstreem
> suppliers do ones that are designed to protect from 60V to mains
> voltages and they are rated in the energy they can absorb rather than
> a power rating. The idea being the energy can be very high, if it only
> lasts for a small time.
>
>
> All the best...Mike.

613. Looking for curtis chip

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 16:46:12 UTC
From: John Smith <john@smith.com>
Message-ID: <ovC28.10003$OS5.873994@newsread1.prod.itd.earthlink.net>
Source record: 47003

Anyone have aknown good 8044 "B" lying around they would be willing to sell?

Roger KD6CC

614. Re: 2m drive to 20m transverter anyone?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 16:47:45 UTC
From: la8ak.xnd@online.no
Message-ID: <3c4adb45.510669418@news.online.no>
Source record: 47004

On Sat, 19 Jan 2002 15:00:10 +0000, Eamon Skelton
<Xnospam@oceanfree.net> wrote:

>In article <3c495e0d.3413999@news.freeserve.net>, Mike W wrote:
>> HI Folks, I'm looking for inspiration and existing designs for a 2m to
>> 20m transverter, similar to the Tokyo MX-240.
>> any ideas?.
>> cheers Mike W, G8NXD, M3MSM
>
>It's probably easier to transvert from 2 to 20 than it
>is to transvert from 20 to 2.
>
it's probably easier to transvert from 14 to 144 than it is from 28 to
144 for the reason that 5x 29 = 145MHz, 20m was used in the earlier
days of 2m converters and transverters, but one changed to 10m because
of 2mHz coverage. Mirror freq. products was also lower for 10m

it is sometimes not so easy for direct transverting, so one problem is
to go from 144 to 1296, and this is overcome in the Swedish UHF units
transverter (constructed by SM6DJH) with conversion from 144 to 28 and
then to 1296. while on receive side direct conversion for 1296 to
144MHz is done. This idea might be considered for other bands.

73
LA8AK
--
remove ,xnd to reply

615. Re: Really stoopid inductor question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 17:11:35 UTC
From: Edward2001 <Edward2001@peoplepc.com>
Message-ID: <3C4AFA47.34C92900@peoplepc.com>
Source record: 47012

Using my program FNC-Elcad, it computes the inductance as 64 microhenries. It also displays the formula uses as 100 times the square root of inductance (in microhenries) divided by the AL (the inductance index of that core).
100 * sqrt[64 / 420] = 64 --- Brian

"Clifton T. Sharp Jr." wrote:

> This must not be my day. I'll spare you the details, but various means of
> trying to figure the inductance of this coil have gotten me answers ranging
> from 7 uH to 22,815 uH. Someone hand me a fish, please. T-80-26 core,
> 39 turns of #20 wire.
>
> --
> Remember, "close" counts in horse-shoes, hand-grenades and nuclear warfare,
> but in spamming, it's considered unnecessary precision. -- Alun Jones

616. Qso Manager

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 18:39:08 UTC
From: Paolo Nossa <ik4clf@inwind.it>
Message-ID: <g9E28.4865$Rv3.266181@news2.tin.it>
Source record: 47006

www.qsl.net/ik4clf
HF QSO/QSL/Award managment, ADIF Import/Export, full version free to
everybody.
Requires Access 97 or Access 2000 (with JPEG and TIFF filter installed),
screen resolution 800x600/1024x768.
Includes: over 9500 logged QSO's for easy/quick testing of performance and 5
maps (Italy, Usa, Usa-Cal, Usa-Fla, Svalbard Is).
Full mapping (382 maps) available at Downloads page or free on request
(CD-ROM).

617. Dummy needs help w/grid dip meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 21:17:08 UTC
From: WebRat@wehackz.org
Message-ID: <aebm4u4mmdf1imujajjlrivljemio8fcrr@4ax.com>
Source record: 47007

Hi all,

I am in possession of a grid dip meter that I have no idea how to operate! I would RTM, but, there's no M to R ;) The only other ham I know is a off-the-shelf 2-meter only kinda fella. He tried, but doesn't know much more than I do about the thing.

If I understand what I've found about it, here's what I do.

1. install a coil to oscillate in the desired range e.g., 3.7 MHz - 8.0 MHz for 40Meters
2. after warm-up, adjust the output so that the meter reads at a setpoint on the scale.
3. place the coil near the circuit under test (2 turns of #22 solid wire across the feedline of my cut-freq 7.150MHz dipole in this case)
4. vary the freq control until there is a large change in the meter reading.

Here's the problem; the thing has several large fluctuations across the range of the selected coil, none of which seem to be harmonics of 7.15 MHz.

The VSWR meter shows me 1.2:1 at 7.15MHz, so the antenna is properly tuned, or the swr meter is lying.
Anyone got some help for a digital dummy attempting to climb into a vaccuum tube world?

thnx

618. Re: Dummy needs help w/grid dip meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 21:26:56 UTC
From: Gary Glaenzer <nobulltrans@irtc.net>
Message-ID: <zCG28.17$M79.2162807@news2.randori.com>
Source record: 47008

<WebRat@wehackz.org> wrote in message
news:aebm4u4mmdf1imujajjlrivljemio8fcrr@4ax.com...
> Hi all,
>
> I am in possession of a grid dip meter that I have no idea how to
> operate! I would RTM, but, there's no M to R ;) The only other ham I
> know is a off-the-shelf 2-meter only kinda fella. He tried, but
> doesn't know much more than I do about the thing.
>
> If I understand what I've found about it, here's what I do.
>
> 1. install a coil to oscillate in the desired range e.g., 3.7 MHz -
> 8.0 MHz for 40Meters
> 2. after warm-up, adjust the output so that the meter reads at a
> setpoint on the scale.
> 3. place the coil near the circuit under test (2 turns of #22 solid
> wire across the feedline of my cut-freq 7.150MHz dipole in this case)

well, I've never operated one (disclaimer), but are you saying that you
actually have a 2-turn coil electrically attached to the feedline?

I'd think that would mess it up but good.....and I've only heard of
using these to check the resonant frequency of a coil/cap tank circuit,
never a feedline

just my $ 0.02

G

> 4. vary the freq control until there is a large change in the meter
> reading.
>
> Here's the problem; the thing has several large fluctuations across
> the range of the selected coil, none of which seem to be harmonics of
> 7.15 MHz.
>
> The VSWR meter shows me 1.2:1 at 7.15MHz, so the antenna is properly
> tuned, or the swr meter is lying.
> Anyone got some help for a digital dummy attempting to climb into a
> vaccuum tube world?
>
> thnx
>
>

619. Re: Wanted: PacComm Add-on Packet TNC for PacTor Controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 22:08:28 UTC
From: perry chamberlain <kato@qnet.com>
Message-ID: <3C4B3FDC.EF5CCD5F@qnet.com>
Source record: 47009
Cross-posted to: alt.ham-radio.packet,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

look on e-bay

Mike Pupeza wrote:

> Hi All;
> I am looking for the add-on TNC kit for the PacComm Pactor Controller.
> This unit was made in the early 90's and added packet capability to the HF
> Pactor Controller which already worked for Amtor and RTTY!
> Does anyone have one of these units sitting around?
> My Controller already has the faceplate and switch for this mod.
> PacComm, apparently, no longer support ANY of their Pactor products!
> TIA
> 73
> Mike VE3EQP.....>

--
Perry Chamberlain
Kato@qnet.com
Liv'n on de Edge n de Desert
Everyone has someone in their family who is crazy,
if you don't know who it is, its you!

620. Re: Dummy needs help w/grid dip meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 22:34:28 UTC
From: w4pqwhs@aol.com
Message-ID: <20020120173428.24360.00000566@mb-cf.aol.com>
Source record: 47010

>Subject: Dummy needs help w/grid dip meter

The grid dip meter is for determining the frequency of a resonant circuit, your antenna plus the feedline is giving the GD a hard time... for this application you need an antenna analyzer,like MFJ 259 ...use the GD to find resonance in tank circuits etc..they are essential in amplifier building, traps, any high Q tuned circuits etc.. tto check an antenna with GD, connect the coupling coil to the feed point of the ant.. at the center of a dipole,at the base of a vertical etc.. some of the old handbooks have articles on using the GDO..good luck
Harold W4PQW

621. Re: Another Inductor Question: With a "Twist"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 23:37:36 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <a2fkba$12v$1@slb7.atl.mindspring.net>
Source record: 47013

Reg:

[snip]
"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:a2etfe$10lps5$1@ID-124126.news.dfncis.de...
> Variometers with opposing coils would have a terrible performance in
> transmitting antenna tuners. Inductance decreases to near zero but wire
> resistance remains at the same high value as when coils are aiding each
> other.
>
> Q = Omega*L/R
>
> OK for crystal sets if near the transmitter.
> ----
> Reg.
[snip]

Quite right...

Although the mutual inductance M has no winding resistance per se, the
winding resistance of L1 and L2 remains the same whether their flux is
aiding or opposing, and so the low value of inductance L1+L1-2M caused by
the opposing flux linkages, will have a terrible Q!

Thanks Reg... you caught me again thinking out of the box again!

"A little knowledge is a dangerous thing, but drinking deeply of that
Pierian spring... etc..."

Best,

--Peter K1PO

622. Re: Dummy needs help w/grid dip meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 23:44:17 UTC
From: Walter Treftz <penguino@atlantic.net>
Message-ID: <3C4B5651.6D15A3E9@atlantic.net>
Source record: 47014

Use the greatest dip - N4GL

WebRat@wehackz.org wrote:

> Hi all,
>
> I am in possession of a grid dip meter that I have no idea how to
> operate! I would RTM, but, there's no M to R ;) The only other ham I
> know is a off-the-shelf 2-meter only kinda fella. He tried, but
> doesn't know much more than I do about the thing.
>
> If I understand what I've found about it, here's what I do.
>
> 1. install a coil to oscillate in the desired range e.g., 3.7 MHz -
> 8.0 MHz for 40Meters
> 2. after warm-up, adjust the output so that the meter reads at a
> setpoint on the scale.
> 3. place the coil near the circuit under test (2 turns of #22 solid
> wire across the feedline of my cut-freq 7.150MHz dipole in this case)
> 4. vary the freq control until there is a large change in the meter
> reading.
>
> Here's the problem; the thing has several large fluctuations across
> the range of the selected coil, none of which seem to be harmonics of
> 7.15 MHz.
>
> The VSWR meter shows me 1.2:1 at 7.15MHz, so the antenna is properly
> tuned, or the swr meter is lying.
> Anyone got some help for a digital dummy attempting to climb into a
> vaccuum tube world?
>
> thnx

623. Re: Salvage Parts from a Microwave ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-20 23:44:22 UTC
From: Bigdad <Bigdad@rworld.com>
Message-ID: <qDI28.7242$He.124222@sea-read.news.verio.net>
Source record: 47015

"Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote in message
news:nrm28.45349$Hg7.5107317@news11-gui.server.ntli.net...
>
> >
> > The family microwave burnt up today. Fire extinguished with
> standard
> > ABC-type device. Looks like the magnetron burned through into the little
> plastic
> > piece that covers it. Alas ! Any parts worth salvaging before I pitch
> it??

I ran across a page on the web about Linear amps that mentioned using the hi voltage transformer from a microwave oven for power but alas the url esapes me...anyone familiar with this?

624. TRW RF Transistors (used in old Ten TEC 50 watt HF AMP PT5741) WTB

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 00:21:01 UTC
From: ve3ab@mondenet.ca
Message-ID: <3c4b5e1c.239264@news.mondenet.com>
Source record: 47016

I would like to purchase TRW PT5741 transistors..matched pair
preferred. Used in my 405 Qrp Amp..these are older transistors..mine
are stamped date code in 1973. An alternative would be an equivilent
or upgrade transistor..anyone have any of these stashed away some
where?? 73 Earl VE3AB..note; I had power supply problems which casused
the problem..they measure bad...

625. Re: Dummy needs help w/grid dip meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 00:33:58 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c4b5f30.208721797@news.erols.com>
Source record: 47017

On 20 Jan 2002 22:34:28 GMT, w4pqwhs@aol.com (W4pqw HS) wrote:

>>Subject: Dummy needs help w/grid dip meter
>
>The grid dip meter is for determining the frequency of a resonant circuit, your
>antenna plus the feedline is giving the GD a hard time... for this application
>you need an antenna analyzer,like MFJ 259 ...use the GD to find resonance in
>tank circuits etc..they are essential in amplifier building, traps, any high Q
>tuned circuits etc.. tto check an antenna with GD, connect the coupling coil to
>the feed point of the ant.. at the center of a dipole,at the base of a vertical
>etc.. some of the old handbooks have articles on using the GDO..good luck
>Harold W4PQW

I have both an MFJ-259B and an old A/N-PRM-10 (classic old Navy GDO).
I'm no expert in either; But I knew I'd need them one day . The old GDO was my
first "fix-up" project and works very well. The MFJ-259B is a godsend and I now
use it regularly in tune-ups --- incredibly accurate.

The reason I mention all this is to make two small, non-expert suggestions:
1. Go to the MFJ web-site. They put their manuals out on the net and by reading
in-between the lines you can get some info on your GD as the MFJ-259B
includes those functions as well.

2. If your GDO includes an oscillator,..For a much easier test -- Put in a
coil whose freq. range covers any radio you own. Turn on the radio and
sit near it. Now twiddle the dial until - - Magic !! The music goes away.
Fun easy test. Or just wind some wire around a toilet paper roll and see
what you get. Also interesting.

I hope I helped,

Andrew

Reticulum

Remove "your.hat" when replying via e-mail

626. Re: Another Inductor Question: With a "Twist"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 01:11:45 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a2fq5h$10qf29$1@ID-124126.news.dfncis.de>
Source record: 47018

To end the story, as you say, when the two coils are series aiding the added mutual inductance introduces no extra resistance yet the total inductance is doubled.

But let no-one run away with the idea we have invented a super-duper very high Q coil.

The coil conductors are now in close proximity to each other and, have a guess, proximity (skin) effect and parasitic capacitance reduce Q to a smaller value than that of either coil alone. ;o(
--
Regards, Reg G4FGQ

627. Need color code for Drake L-4B/L-7 xfmr

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 02:46:04 UTC
From: Dave Heil <k8mn@earthlink.net>
Message-ID: <3C4B80B2.238F875A@earthlink.net>
Source record: 47019

Would someone please advise me of the color coding for the leads on a Drake L-4B or L-7 power transformer? The red HV secondary leads are obvious. I need help in identifying the others.

Thanks.

Dave Heil K8MN

628. Re: Dummy needs help w/grid dip meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 02:49:19 UTC
From: WebRat@wehackz.org
Message-ID: <800n4ug0ificl1mbdbnleus89ve40vapkv@4ax.com>
Source record: 47020

On Sun, 20 Jan 2002 21:26:56 GMT, "Gary Glaenzer"
<nobulltrans@irtc.net> wrote:

>
><WebRat@wehackz.org> wrote in message
>news:aebm4u4mmdf1imujajjlrivljemio8fcrr@4ax.com...
>> Hi all,
==========snip!==========
>> I am in possession of a grid dip meter that I have no idea how to
>> operate! I would RTM, but, there's no M to R ;)

==========---==========
>well, I've never operated one (disclaimer), but are you saying that you
>actually have a 2-turn coil electrically attached to the feedline?
>
==========snip!==========

It seems that I am attempting to look at my dipole from the incorrect
point..thanks, everyone, for that! In answer to your specific
question; No, the meter is not physically attached to the feedline. I
put 2 turns of wire across the feedline conductors and then put the
oscillator coil of my meter near those 2 turns, achieving an
electromagnetic coupling with the antenna circuit. Evidently, the
feedline was giving the meter a hard way to go. It seems to work
properly when used with a RLC ckt on the bench..
tanks! ;)
73
flyguy

629. Homebrew Keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 04:16:14 UTC
From: KU4YP <ku4yp@earthlink.net>
Message-ID: <01c1a231$b4df12e0$e344bfa8@ku4yp>
Source record: 47021

hello all,

i saw a neat homebrew keyer/paddle combination and wanted to ask if anyone
has plans for one? something like the heathkit keyer/paddle unit.

any help appreciated.
--
73 de KU4YP "There is no spoon......"
Michael Prevatt
Willow Oak, Florida 10X #70625
Active HF/VHF/Digital 10X International Net

630. Re: Another Inductor Question: With a "Twist"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 07:36:24 UTC
From: ok1sip@atlas.cz
Message-ID: <8f3e93b5.0201202336.70d05d8f@posting.google.com>
Source record: 47022

Hi Andy,
most advices are "make two coils of the same diameter, length etc.".
This is true for maximizing the inductance ratio, but impractical in
realization.
Variometers are used e.g. for L.F. antenna matching. Look at
http://www.sweb.cz/ok1fig/loading.htm , you will find a picture of a
homebrewed variometer. Search L.F. (136 kHz) ham pages for more about
making variometers.

BR from Ivan

631. Sharp Tuner Circuit Diagram

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 07:50:16 UTC
From: Ken Duncanson <duncos@ozemail.com.au>
Message-ID: <yIP28.6673$N31.286911@ozemail.com.au>
Source record: 47023

I am looking for a circuit diagram of a Sharp TV/VCR Tuner. It has the model number VTSH6AD02 printed on the side. Can anyone help?
Ken VK4JUD

632. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 08:23:19 UTC
From: Mike <m.j.willis@rl.ac.uk>
Message-ID: <a2gj97$11og@newton.cc.rl.ac.uk>
Source record: 47029

> But even with good color vision, I have
> trouble with some color-coded resistors: some of the manufacturers
> use a "red" that looks very "red-orange" -- and others use an "orange"
> that's shaded awfully far toward red. Those are the two that give me
> the most trouble, and it's no use trying to get the "multiplier" band
> from context as you often can the first two (or three, for 1%) digits.
>

Do you read them under tungsten filament lights or fluorescent lights? Like
with cloths, It makes a big difference.

633. LT2S wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 08:56:44 UTC
From: iw1arb <iw1arb@hotmail.com>
Message-ID: <a2gl4c$1mq$1@serv1.iunet.it>
Source record: 47024

[No readable article body recovered]

634. Re: DDDS BOARDS..NOVA TECH..QUALCOM chips..ANY ONE HAVE??-anyonebuiltone???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 11:50:02 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C4C0126.7ADA@pop.removethistomailme.net>
Source record: 47025

Earl Andrews wrote:
>
> I have 4 of the NOVATECH boards model DDDS
> Synthesizer..they use QUALCOMM chips..probably now
> discontinued from manufacture..Anyone help with anyof these chips??
> Anyone built one of these UNITS?? Id be interested in hearing from
> you. If I can get the parts..Ill build at least one..Earl VE3AB

I *might* have a couple of 50 MHz Q2334 DDS chips around here, if that's what it needs. They require an outboard DAC (I used the Harris HI5710 with them, if I remember right.)

You're better off with Richard Hosking's AD9854 boards, though... the newer Analog parts have their own clock multipliers and run way faster than the old Qualcomm chips. And they don't need a separate DAC.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

635. Re: bigger penis in 3 weeks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 13:56:40 UTC
From: KC8JBO <kc8jbo@alt.net>
Message-ID: <a2h93cmte0@pita.alt.net>
Source record: 47026
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

<xphbtf@hotmail.com> wrote in message
news:8UU28.5126$2V3.17109@news.uswest.net...
> I found this interesting article on penis development:
>
> " Amazing excersise system to improve your sex life, increase your
> penis size, and help to reduce the risk of prostate cancer"
>
> The cost is less than $40.00 and seems good value, please if you intend on
looking at this link,
> I will let you know that it is non-porn, however there are a few "graphic"
pics.
>
> go to http://zlap.to/pd11
> cya, Im off to bed now
> zzz

Hey Stagger Lee and Arf arf!, there's hope for you two to save your
marriages yet, and you can afford to cash in $40 worth of your food stamps.

636. Re: Another Inductor Question: With a "Twist"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 15:01:52 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c4c2aac.36863054@news.erols.com>
Source record: 47027

On 20 Jan 2002 23:36:24 -0800, ok1sip@atlas.cz (Ivan) wrote:

>Hi Andy,
>most advices are "make two coils of the same diameter, length etc.".
>This is true for maximizing the inductance ratio, but impractical in
>realization.
>Variometers are used e.g. for L.F. antenna matching. Look at
>http://www.sweb.cz/ok1fig/loading.htm , you will find a picture of a
>homebrewed variometer. Search L.F. (136 kHz) ham pages for more about
>making variometers.
>
>BR from Ivan

You're right that many interesting links come up. Thx. My basic idea
was simply to see if using a variometer-style would be an adequate substitute
for tapping the coil.

Having read a couple books from the Xtal Society, I quickly saw that much
of what would be "improvement" in Xtal set design is kinda aesthetic -- meaning
improving on toilet paper-roll wound coils,etc. Some stuff is not for looks. I
think a variometer is a really neat-looking thing. Perhaps that's not a rational
remark. But then, the correspondence between beauty and rationality has been
debated since Aristotle --- Hi,Hi.. I think radio is beautiful -- Go figure.

Thx. for replying. I just wanted to calculate results of various coil
diameters in terms of the predicted resonant freq. of the tank-circuit. Your
reply will give me more food for thought as well.

73 de KG4JBM
Reticulum

Remove "your.hat" when replying via e-mail

637. Re: Need color code for Drake L-4B/L-7 xfmr

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 15:07:18 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <OdW28.64697$WQ1.9940546@news6-win.server.ntlworld.com>
Source record: 47028

"Dave Heil" <k8mn@earthlink.net> wrote in message
news:3C4B80B2.238F875A@earthlink.net...
> Would someone please advise me of the color coding for the leads on
> a Drake L-4B or L-7 power transformer? The red HV secondary leads are
> obvious. I need help in identifying the others.
=========
If you surely know the leads for the HV winding ,connect the winding to 120 or 230 V supply and measure the voltages on the other pairs of leads. (first establishing the pairs by checking (without power connected) with an ohm meter.
You now know the relative winding voltages from which you can determine the ACTUAL supply voltage winding.

In this way you can establish the various winding voltages from any mystery transformer.
If you are not sure whether the winding to initially power up is LV or HV apply a low voltage ,say 5-6 V from a known transformer and do your sums ,using a digital voltmeter. Be a Ham -detective and enjoy it !

Good Luck

Frank gm0csz.kn6wh@ntlworld.com

638. Re: bigger penis in 3 weeks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 15:53:14 UTC
From: Walt Davidson <walt99@tiscali.co.uk>
Message-ID: <95eo4u4eg2t2n303o7sam8jtpb25jk6a19@4ax.com>
Source record: 47030
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

On Mon, 21 Jan 2002 08:56:40 -0500, "KC8JBO" <kc8jbo@alt.net> wrote:

>> " Amazing exercise system to improve your sex life, increase your
>> penis size, and help to reduce the risk of prostate cancer"

LOL!

Is there anyone from the age of 12 upwards who does not already have
first hand knowledge (and I choose my words carefully) of this
"amazing exercise system"?

;-)

73 de G3NYY

--
Walt Davidson Email: g3nyy @freeuk.com

639. Will it...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 16:22:30 UTC
From: rasw <atdot.dotat@at.sorry>
Message-ID: <a2hf8g$3guvb$1@rn.area.com>
Source record: 47031
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

...make my ANTENNA bigger too?

"Walt Davidson" <walt99@tiscali.co.uk> wrote in message
news:95eo4u4eg2t2n303o7sam8jtpb25jk6a19@4ax.com...

> Is there anyone from the age of 12 upwards who does not already have
> first hand knowledge (and I choose my words carefully) of this
> "amazing exercise system"?
>

640. Re: Will it...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 16:49:06 UTC
From: "J. David Schronce" <david.nospam@schronce.f2s.com>
Message-ID: <3C4C4695.9020104@schronce.f2s.com>
Source record: 47033
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

No, but you'll go blind so your hearing will gt better - so MORE DX!!

rasw wrote:

>...make my ANTENNA bigger too?
>
>
>"Walt Davidson" <walt99@tiscali.co.uk> wrote in message
>news:95eo4u4eg2t2n303o7sam8jtpb25jk6a19@4ax.com...
>
>>Is there anyone from the age of 12 upwards who does not already have
>>first hand knowledge (and I choose my words carefully) of this
>>"amazing exercise system"?
>>
>
>

641. Re: Another Inductor Question: With a "Twist"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 17:11:23 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a2hidi$11drmn$1@ID-124126.news.dfncis.de>
Source record: 47032

Download from website below program TWOCOILS which designs two different coils and calculates the the hard bits: - coupling coefficient and mutual inductance.

It doesn't go as far as calculating the series-aiding or opposing inductances but given the mutual inductance you can do that yourself with a pocket calculator.

But as I have said elsewhere, variometers used in wideband antenna tuners would be very lossy, especially at the higher frequencies. Which is why they are not used.

They have been used in the past as a variable sort of link coupling to load PAs into antenna transmission lines. A wierd sort of motion to watch. The control shaft comes out of the main coil at an angle of 45 degrees.
--
****
Regards, Reg G4FGQ
Free Radio Modelling Programs
Http://www.g4fgq.com
****

642. Hairpin filter articles

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 17:26:19 UTC
From: The Technical Manager <techman@niobiumfive.co.uk>
Message-ID: <3C4C4F3B.8CC39219@niobiumfive.co.uk>
Source record: 47034
Cross-posted to: sci.electronics.components,sci.electronics.design,rec.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

A number of articles on hairpin bandpass filters were written by Rick Campbell KK7B and Jim Davey WA8NLC and published in QST and QEX.

In which issues did these articles appear ?

643. Re: Will it...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 17:27:48 UTC
From: KC8JBO <kc8jbo@alt.net>
Message-ID: <a2hmu6$l2r$0@pita.alt.net>
Source record: 47036
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

```
"rasw" <atdot.dotat@at.sorry> wrote in message
news:a2hf8g$3guvb$1@rn.area.com...
> ...make my ANTENNA bigger too?

That's what Viagra is for!
LOL!

> "Walt Davidson" <walt99@tiscali.co.uk> wrote in message
> news:95eo4u4eg2t2n303o7sam8jtpb25jk6a19@4ax.com...
>
> > Is there anyone from the age of 12 upwards who does not already have
> > first hand knowledge (and I choose my words carefully) of this
> > "amazing exercise system"?
> >
>
>
```

644. Re: bigger penis in 3 weeks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 17:35:38 UTC
From: KC8JBO <kc8jbo@alt.net>
Message-ID: <a2hmu9$l2r$3@pita.alt.net>
Source record: 47037
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

"Walt Davidson" <walt99@tiscali.co.uk> wrote in message
news:95eo4u4eg2t2n303o7sam8jtpb25jk6a19@4ax.com...
> On Mon, 21 Jan 2002 08:56:40 -0500, "KC8JBO" <kc8jbo@alt.net> wrote:
>
> >> " Amazing exercise system to improve your sex life, increase your
> >> penis size, and help to reduce the risk of prostate cancer"
>
> LOL!
>
> Is there anyone from the age of 12 upwards who does not already have
> first hand knowledge (and I choose my words carefully) of this
> "amazing exercise system"?
>
> ;-)
>
> 73 de G3NYY
>
> --
> Walt Davidson Email: g3nyy @freeuk.com

Dunno since I didn't write the original post. Ask "it."

645. FS/BO: Collins 30K-4

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 18:01:10 UTC
From: Walter Treftz <penguino@atlantic.net>
Message-ID: <3C4C5766.24D1120E@atlantic.net>
Source record: 47035

FS: Collins 30K-4 Vintage HF Transmitter.

Taking offers on my partially restored 30K-4 xmtr.
Several years ago I acquired this rig with the idea
of restoring it after retirement. The time has come
and I have come to the conclusion that I bit off
more than I can chew - not technically as it is very
easy to work on (in 5' rack) and straight-forward
circuitry - but timewise. I have been putting about 75%
of my spare time on restoration taking away from
projects that I am now more interested in (i.e., VLF,
antennas, D/F).

It is about 75% restored. On all the individual chasis
they have been cleaned and things like xfmrs, chokes,
etc. were removed, cleaned, repainted, replaced, etc.
Only the cabinet (5' Bud rack) remains to be refinished.
Most of the components have been checked by applying
either 110vac (via Variac) or B+ (variable 0-500vdc
supply) and slowly bring up the applied voltages to
season the electrolytics, check insulation, etc.

It is missing the tubes (6V6, 807, 4-125A in the RF
and the speech ampl/mod tubes). It has the 3-5 mhz
RF coils & xtals. It is unmodified in anyway. The
only addition has been a set of heavy casters so as
to move it about but I plan to remove these so it is
"virgin"

Digital pix are available (complete unit, before/after
of each chasis, etc) to the seriously interested. It
comes with a copy of the complete manual.

I am not interested in donating it and have a lot of
work in it along with the original price I paid.
Naturally, a pickup deal would be ideal as it probably
weighs 500 lbs or better.

If interested, contact:
Walter Treftz (N4GL)
penguino@atlantic.net
(352) 637-1755

646. Re: Big question.... Torodes?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 18:11:21 UTC
From: Edward2001 <Edward2001@peoplepc.com>
Message-ID: <3C4C59C8.973FADF3@peoplepc.com>
Source record: 47048

Go to http://www.fncwired.com and download their trial version (for free). With it, you can tell how many turns you will need, for the cores that you mentioned. The program is called "FNC-Elcad". You will probably see other things in it as well, that are very useful.
Regards,
Brian

Kc7eip wrote:

> Well at my location the supply of torodes are verry slim infact the only
> ones in stock are t50-6...I need two t50-2 and one t37-6 i believe the
> first two are for an swr/antenna tunner project the latter is to make an
> inducter for 40 meters... please forgive my lack of knowledge but is there
> an easy way to figure out the required turns for use on the t50-6 for both
> the projects or is this not really possible.. I could mail order the
> required ones but i only need three and the large numer i would need to
> order from online is over kill for me...

647. Re: Will it...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 18:35:49 UTC
From: KC8JBO <kc8jbo@alt.net>
Message-ID: <a2ho5qnej0@pita.alt.net>
Source record: 47038
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

"J. David Schronce" <david.nospam@schronce.f2s.com> wrote in message
news:3C4C4695.9020104@schronce.f2s.com...
> No, but you'll go blind so your hearing will gt better - so MORE DX!!

He won't need any preamp, either.
LOL!

> rasw wrote:
>
> >...make my ANTENNA bigger too?
> >
> >
> >"Walt Davidson" <walt99@tiscali.co.uk> wrote in message
> >news:95eo4u4eg2t2n303o7sam8jtpb25jk6a19@4ax.com...
> >
> >>Is there anyone from the age of 12 upwards who does not already have
> >>first hand knowledge (and I choose my words carefully) of this
> >>"amazing exercise system"?
> >>
> >
> >
>

648. Re: Dummy needs help w/grid dip meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 18:58:13 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <a2hoc4$rt0$1@knossos.btinternet.com>
Source record: 47039

<WebRat@wehackz.org> wrote in message
news:aebm4u4mmdf1imujajjlrivljemio8fcrr@4ax.com...
> Hi all,
>
> I am in possession of a grid dip meter that I have no idea how to
> operate! I would RTM, but, there's no M to R ;) The only other ham I
> know is a off-the-shelf 2-meter only kinda fella. He tried, but
> doesn't know much more than I do about the thing.
>
> If I understand what I've found about it, here's what I do.
>
> 1. install a coil to oscillate in the desired range e.g., 3.7 MHz -
> 8.0 MHz for 40Meters
> 2. after warm-up, adjust the output so that the meter reads at a
> setpoint on the scale.
> 3. place the coil near the circuit under test (2 turns of #22 solid
> wire across the feedline of my cut-freq 7.150MHz dipole in this case)
> 4. vary the freq control until there is a large change in the meter
> reading.
>
> Here's the problem; the thing has several large fluctuations across
> the range of the selected coil, none of which seem to be harmonics of
> 7.15 MHz.

Try winding a coil on a suitable former (say 30 turns on a 35mm film
cassette container), calculate the inductance using the appropriate formula,
and put it in parallel with a suitable capacitor. Calculate the resonant
frequency and see if you get a dip with the GDO at that frequency. That
should show you how to drive the thing.

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.con
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

649. Re: bigger penis in 3 weeks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 19:29:59 UTC
From: Tom2000 <tom2000@mindspring.com>
Message-ID: <sfqo4uot5c3q0feihuu5l422jv00idaj3f@4ax.com>
Source record: 47040
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

On Mon, 21 Jan 2002 15:53:14 +0000, Walt Davidson <walt99@tiscali.co.uk>
wrote:

>On Mon, 21 Jan 2002 08:56:40 -0500, "KC8JBO" <kc8jbo@alt.net> wrote:
>
>>> " Amazing exercise system to improve your sex life, increase your
>>> penis size, and help to reduce the risk of prostate cancer"
>
>LOL!
>
>Is there anyone from the age of 12 upwards who does not already have
>first hand knowledge (and I choose my words carefully) of this
>"amazing exercise system"?
>
>;-)

ROTFL!!!!

de AB9B

650. Re: QST contra-wound inductor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 20:28:07 UTC
From: James Horn <jimhorn@svn.net>
Message-ID: <3c4c79d6@news.svn.net>
Source record: 47041

I may be wrong, but from what I remember of the article the reference is to a toroidal inductor with significantly reduced self capacitance. This is easy to do but not intuitive.

An ordinary single layer toroidal inductor suffers from capactiance not only between each adjacent turn but from the two leads (which have the largest voltage differential) being close to each other (thus, higher capactiance). For RF use, often a gap of around 20% of the core is left between the start and end just to reduce this.

An alternative is to wind 1/2 of the windings, run the wire across the core to near the start, then do the other 1/2 sprialling in the opposite direction. Then the start and end windings are opposite each other, reducing the capacitance even more. All windings are magnetically in the same direction, so the inductance is unchanged.

Jim Horn, WB9SYN/6

651. misc. parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 21:23:43 UTC
From: Lou <tech@dp.net>
Message-ID: <a2i1podmc1@news.dp.net>
Source record: 47043

Hi,

If you're looking for something to complete your "homebrew" project or doctor up an existing item, e-mail me. Maybe I can save you some bucks. Have lots of items available. Far too many to list. If we have it, we'll let you know. Looking to clear out a lot of this stuff, so most is going CHEAP! Please e-mail direct.

--
Lou
Owner of: C.L. FURLONG ENTERPRISES

Home of "Gifts and More" & "Electronics Plus"

Gifts & Fundraisers - Info upon request

Electronics sales and service, FCC licenses.
Save on your experimenting. Buy for less.
Grab bags, surplus, etc. E-mail pictures of items available.

Accept only Postal MOs by mail. "Cash" and carry on site.

514 Railroad Street
P.O. Box 289
Stockdale, PA 15483

Phone 724-938-7808
E-Mail: Tech@DP.NET
Hours: M-F 9-5 - S/S by appt.
Closed on Holidays

652. 2x 2SC2333 as driver in Kenwood transceiver?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 21:33:51 UTC
From: la8ak.xnd@online.no
Message-ID: <3c4c71d5.2215432@news.online.no>
Source record: 47042

LA1ZM has problem with his Kenwood transceiver, the original device is MRF485, and my suggestion is to use 2SC2333 since it has much higher breakdown voltage. I am aware that somebody else has used this lowcost device, but not so sure about 10m performance

Do you have any experience with this device?
do you know the problems with 28V on driver transistors in Kenwood?
or do you know the gain.bandwidth for it

A local suggestion is to use 12V devices and run the driver with an extra 7812 regulator, a suggestion I do not like at all

sorry, fogot which transceiver it was

73
Jan-Martin
--
remove ,xnd to reply

653. Big question.... Torodes?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 22:24:17 UTC
From: Kc7eip <kc7eip_nospam@shaw.ca>
Message-ID: <Xns919D9289785FBkc7eipshawca@24.64.223.211>
Source record: 47044

Well at my location the supply of torodes are verry slim infact the only ones in stock are t50-6...I need two t50-2 and one t37-6 i believe the first two are for an swr/antenna tunner project the latter is to make an inducter for 40 meters... please forgive my lack of knowledge but is there an easy way to figure out the required turns for use on the t50-6 for both the projects or is this not really possible.. I could mail order the required ones but i only need three and the large numer i would need to order from online is over kill for me...

654. Re: Need color code for Drake L-4B/L-7 xfmr

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 22:57:23 UTC
From: funkbastler <funkbastler@delete-this.yahoo.com>
Message-ID: <1n6p4u8vdl9cpc69l3r8qdv5t4ntr5quqp@4ax.com>
Source record: 47045

On Mon, 21 Jan 2002 02:46:04 GMT, Dave Heil <k8mn@earthlink.net>
wrote:

>Would someone please advise me of the color coding for the leads on
>a Drake L-4B or L-7 power transformer? The red HV secondary leads are
>obvious. I need help in identifying the others.
>
>Thanks.
>
>Dave Heil K8MN

This is out of the L-4B instruction manual:

```
BLK/GRN -----)||(--------RED
)||(
YEL/GRN------)||(
||(
GRN------)||(
)||(
BLU------)||(
)||(
BRN------)||(
||(
YEL------)||(
)||(
BRN/BLK------)||(--------RED
```

For 240V operation, connect YEL/GRN to GRN, and YEL to BRN.

For 120V operation, connect BLK/GRN to GRN, YEL/GRN to BLU and YEL,
and BRN to BRN/BLK.

Is that enough info, or do you need to know how things hook up to the
L-4B?

655. Re: Need color code for Drake L-4B/L-7 xfmr

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-21 23:13:52 UTC
From: Dave Heil <k8mn@earthlink.net>
Message-ID: <3C4C9F7A.E09AD1E6@earthlink.net>
Source record: 47047

funkbastler wrote:
>
> On Mon, 21 Jan 2002 02:46:04 GMT, Dave Heil <k8mn@earthlink.net>
> wrote:
>
> >Would someone please advise me of the color coding for the leads on
> >a Drake L-4B or L-7 power transformer? The red HV secondary leads are
> >obvious. I need help in identifying the others.
> >
> >Thanks.
> >
> >Dave Heil K8MN
>
> This is out of the L-4B instruction manual:
>
> BLK/GRN -----)||(--------RED
>)||(
> YEL/GRN------)||(
> ||(
> GRN------)||(
>)||(
> BLU------)||(
>)||(
> BRN------)||(
> ||(
> YEL------)||(
>)||(
> BRN/BLK------)||(--------RED
>
> For 240V operation, connect YEL/GRN to GRN, and YEL to BRN.
>
> For 120V operation, connect BLK/GRN to GRN, YEL/GRN to BLU and YEL,
> and BRN to BRN/BLK.
>
> Is that enough info, or do you need to know how things hook up to the
> L-4B?

Perfect! Nothing else needed--I'm using the xfmr to power a pair of
4CX250Bs on 2m. Many thanks.

Dave K8MN

656. Re: Big question.... Torodes?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 00:25:05 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u4pcbfe5vmd9a@corp.supernews.com>
Source record: 47049

First of all, you can get toroids at www.radioshack.com. For very small quantities, they are probably the best bet. Still, it's worth checking kitsandparts.com too, his shipping isn't bad and his prices are so low that you may find it reasonable. hehe .. I looked at your email and thought maybe getting them across the border costs, but then I looked at your call!!

Next, yes, the equations are in the handbook, and also if I recall on either Palomar Engineers or Amidon's web site. Basically, the number of turns is 100 times the square root of L/A where L is the inductance you want in microhenries, and A is:

T50-2 49
T50-6 40
T37-2 40
T37-6 30

However, the -2 and -6 mixes aren't totally interchangeable. The -2 is generally used at lower frequencies, the -6 at higher. There is considerable overlap in their frequency ranges, so there's a good chance that you may be in luck. The Handbook says that the -2 is good for 2-30MHz, but I've never seen them used much above 30 meters. Probably because the permeability is so high that you can't make practical inductors for those frequencies. The -6 is good for 10-50. That sort of says that your T50-6 may not be a good choice for 40 meters. You can still try, but keep in mind that the loss may be higher, and the inductance will be different from what you calculate.

..

"Kc7eip" <kc7eip_nospam@shaw.ca> wrote in message
news:Xns919D9289785FBkc7eipshawca@24.64.223.211...
> Well at my location the supply of torodes are verry slim infact the only
> ones in stock are t50-6...I need two t50-2 and one t37-6 i believe the
> first two are for an swr/antenna tunner project the latter is to make an
> inducter for 40 meters... please forgive my lack of knowledge but is there
> an easy way to figure out the required turns for use on the t50-6 for both
> the projects or is this not really possible.. I could mail order the
> required ones but i only need three and the large numer i would need to
> order from online is over kill for me...

657. FS New parts used stuff and more

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 00:28:50 UTC
From: pr1822@netscape.net
Message-ID: <eb855faf.0201211628.60c65763@posting.google.com>
Source record: 47050

Lot's of Brand New Electrolytics Caps
Radial and Axial 105 deg C .
Some 85 Deg C

ICs
Volt Reg ICs

Opto Electronics from Honeywell

Misc. new power supplies
HP used Spectrum Analyzer

Collins S Line Equip.
Misc Tubes, Connectors etc...

and more..

Located in zip 93446

See all at:
http://www.electronicparts.homestead.com/

E Mail only please..

658. fs 1 Ghz Tuners from Sat tv nec sharp and more

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 00:34:20 UTC
From: pr1822@netscape.net
Message-ID: <eb855faf.0201211634.449d985b@posting.google.com>
Source record: 47051

C/Ku Band Tuners fs.

NEC 1 Ghz
950 in 70 Mhz out
Brand new
Data Sheet available

Lot's of misc Brand Used tuners all MFGs

e mail sattvro@yahoo.com for info and pricing

see www.sattvrepair.com for more

659. Re: Will it...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 00:42:15 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c4cb52b.72323508@news.erols.com>
Source record: 47052
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

The group might be interested in this news item:

Pfizer Corp. (NYSE PFE) is making the announcement today that VIAGRA
will soon be available in liquid form and will be marketed by Pepsi Cola
(Pepsi Bottling Group NYSE PBG) as a power beverage suitable for use
as-is, or as a mixer, under the name "Mount And Do."
Pepsi's proposed ad campaign suggests: "It will now be possible for a
man to literally pour himself a stiff one."
>

Reticulum

Remove "your.hat" when replying via e-mail

660. Surface Mount Headers ???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 02:10:50 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <u4p7apsobp6pc7@corp.supernews.com>
Source record: 47046

I have a couple IC's that are SMT. For example MC1496 mixers
and an AD9832 DDS chip. In looking at the AD9832 I am somewhat
nervous about trying to attach small wires to the legs to hook them up.
What are some of the methods used? Is there any sort of small PC
boar available in a generic size that can be used to connect these
chips?

Doug N4IJ

661. What parameters yield highest toroid Q

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 02:45:32 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <ukjp4ugpolucpitm1gcq5eddup6d74omgd@4ax.com>
Source record: 47053

Ok, I know this is a very broad question, but I'm curious what combinations people have used.

For example, I've read that 17 turns of #18 wire on a T-68-6 core will yield a Q of nearly 400 at around 10 MHz. That's off the charts of the literature Amidon distributes.

First, is this a realistic Q figure?

Second, if this is realistic, can I scale this performance to an inductor on another frequency, using materials such as #2 or #7? All other parameters such as toroid size, wire size and number of windings can change, I'm primarily looking for the combinations which will yield the highest Q at some HF frequency.

Third, there must be more complete references on this subject than the literature Amidon gives out for free; does anyone have suggestions?

Thanks in advance and 73,

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

662. Re: Looking for curtis chip

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 03:07:13 UTC
From: Larry Gagnon <lagagnonfake@sprint.ca>
Message-ID: <slrna4plq4.3vvo4i7.lagagnonfake@lagagnon.sprint.ca>
Source record: 47054

In article <ovC28.10003$OS5.873994@newsread1.prod.itd.earthlink.net>, John Smith wrote:
> Anyone have aknown good 8044 "B" lying around they would be willing to
> sell?
>
> Roger KD6CC
well actually if you're thinking of building a keyer around 1 chip I would go
for the K1EL K10 chip instead...much more powerful, full fledged memory
keyer. But then if it is a replacement chip you want sorry can't help

Larry VE6MK

663. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 03:23:36 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <16mp4us11878q7nk6sca1qo8er073fvfco@4ax.com>
Source record: 47055

On Fri, 18 Jan 2002 15:30:12 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>I'm not a pilot, but I was under the impression that the prohibition on
>flying at night wasn't due so much to inability to interpret light guns,
>but inability to distinguish wing lights. Without that ability, you
>couldn't tell if an aircraft was flying toward you or away from you. I
>thought the light guns were just used as a convenient and standard
>source of red and green lights for the test.

True, if you can't tell the difference between red and green wing tip
lights night you may have a small problem. I hadn't thought of that.

Still, there are exceptions available too. They're called Statements
Of Demonstrated Abilities (SODA). It's commonly used to get waivers
and occasionally restricted privileges for handicapped pilots. This
guy could get a SODA limiting his night operations to Towered airports
under instrument rules. When flying under instrument rules, the air
traffic controllers are responsible for separation...

If this guy is still interested in flying, tell him not to give up,
there are ways he can get a certificate.

73,

Jake Brodsky, mailto:frussle@erols.com
PP ASEL IA, Cessna Cardinal N30946, Based @ FME
Amateur Radio Station AB3A

664. Re: Surface Mount Headers ???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 03:25:31 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C4CDBAB.2CCD2690@ieee.org>
Source record: 47056

Yes, there are,

The brand I know of are called SurfBoards. Digikey sells them. Find Surfboard's webpage and get the real data there so you may select what you need.

Clyde

KA1CRV

Douglas Snowden wrote:

> I have a couple IC's that are SMT. For example MC1496 mixers
> and an AD9832 DDS chip. In looking at the AD9832 I am somewhat
> nervous about trying to attach small wires to the legs to hook them up.
> What are some of the methods used? Is there any sort of small PC
> boar available in a generic size that can be used to connect these
> chips?
>
> Doug N4IJ

665. DB Products switch information.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 04:08:22 UTC
From: Bruce Coates <bruce.coates@sk.sympatico.ca>
Message-ID: <0B538.4555$JM6.1270521@news20.bellglobal.com>
Source record: 47057
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.design,sci.electronics.equipment

Hi,

I'm trying to find the specifications (or any other information) for a coax switch I have. It's made by DB Products and is marked:

Model : 5S04E19
Voltage : 115 VAC
Ser No : 37-6

Any info would be appreciated.

Thanks

Bruce

666. Re: Big question.... Torodes?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 05:41:56 UTC
From: Kc7eip <kc7eip_nospam@shaw.ca>
Message-ID: <Xns919DDCBB734CAkc7eipshawca@24.64.223.211>
Source record: 47058

"xpyttl" <xpyttl_nospam@earthling.net> wrote in
news:u4pcbfe5vmd9a@corp.supernews.com:

> First of all, you can get toroids at www.radioshack.com. For very
> small quantities, they are probably the best bet. Still, it's worth
> checking kitsandparts.com too, his shipping isn't bad and his prices
> are so low that you may find it reasonable. hehe .. I looked at your
> email and thought maybe getting them across the border costs, but then
> I looked at your call!!
Yes radio shack canada only carries a fraction of the parts as radioshack
us.. but will check there for sure... and thanks for the info on the cores
i am understanding a little better.. will try the t-50s but if it does not
work no loss i suppose i will buy the premade inductor...

:) Yes an american ham in canada... Luckily with the recent change in
canadian regs i don't need to relicence for up here however i think i may
take all the tests only two knowledge and one code to get full permissions
and a lifetime license... will have to see.. I'm re-learning code so that i
can use my new radio soon so that should help me with the canadian tests..
Thanks for info and have a good day.

> Next, yes, the equations are in the handbook, and also if I recall on
> either Palomar Engineers or Amidon's web site. Basically, the number
> of turns is 100 times the square root of L/A where L is the inductance
> you want in microhenries, and A is:
>
> T50-2 49
> T50-6 40
> T37-2 40
> T37-6 30
>
> However, the -2 and -6 mixes aren't totally interchangeable. The -2 is
> generally used at lower frequencies, the -6 at higher. There is
> considerable overlap in their frequency ranges, so there's a good
> chance that you may be in luck. The Handbook says that the -2 is good
> for 2-30MHz, but I've never seen them used much above 30 meters.
> Probably because the permeability is so high that you can't make
> practical inductors for those frequencies. The -6 is good for 10-50.
> That sort of says that your T50-6 may not be a good choice for 40
> meters. You can still try, but keep in mind that the loss may be
> higher, and the inductance will be different from what you calculate.
>

667. VHF/UHF Receive antenna DA

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 06:00:24 UTC
From: Richard Crowley <rcrowley7@xprt.net>
Message-ID: <u4q00259l0job0@corp.supernews.com>
Source record: 47059

Current discussion over on alt.audio.pro.live-sound and rec.audio.pro regarding the distribution amplifiers sold for use with multiple wireless microphone receivers.

The one I looked inside of appears to have a single active device (a Mini-Circuit IC?), input bandwidth (bandpass) limiting, and output build-out resistors. Is it really this simple? My gut feeling is that it IS that simple, but that laying out VHF and UHF circuits is not a walk in the park, either.

Are there any generalized circuit designs/layouts for this? (That could be customized for operating band with input filtering, etc.)

Thx, RC

668. Re: DB Products switch information.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 09:33:15 UTC
From: Tim Perry <nospammy-timperry@adelphia.net>
Message-ID: <vla38.5948$Xw4.1309466@news1.news.adelphia.net>
Source record: 47060
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.design,sci.electronics.equipment

"Bruce Coates" <bruce.coates@sk.sympatico.ca> wrote in message
news:0B538.4555$JM6.1270521@news20.bellglobal.com...
> Hi,
>
> I'm trying to find the specifications (or any other information) for a
coax
> switch I have. It's made by DB Products and is marked:
>
> Model : 5S04E19
> Voltage : 115 VAC
> Ser No : 37-6
>
> Any info would be appreciated.
>
> Thanks
>
> Bruce
>

http://www.dbp4switches.com/ see if anything at their website looks like
what you have

669. Re: 2x 2SC2333 as driver in Kenwood transceiver?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 09:35:51 UTC
From: Val <val_a20@hotmail.com>
Message-ID: <3C4D3277.1FF21DAC@hotmail.com>
Source record: 47061

Hi Jan-Martin.
(Answer in English. Do not think the rest of the world
would like a Scandinav-mix language).

This is in the TS930, isn't it?
MRF485 = Dritt!

No additional data available in MWO, ADS or my Motorola
handbook (to old?). Only rudimentary info found. Strangely
enough, it is specified Vceo[max] = 25V, not 28V. If this
is the problem, the MTBF sucks, and the Kenwood engineers,
well...
I do not know if MRF485 is EXACTLY as 2SC1307, but they are
said to be replaceable. This is often used as PA in CB (27 MHz)
equipment (yuck!), and usually fed with 12V (possible cause of
proposal to use 7812??). Perhaps it's easier to track data of
this one (I have not made any serious effort!).

Best regards/treoghalvfjers (73 in Danish)
V

J M Noeding wrote:
>
> LA1ZM has problem with his Kenwood transceiver, the original device is
> MRF485, and my suggestion is to use 2SC2333 since it has much higher
> breakdown voltage. I am aware that somebody else has used this lowcost
> device, but not so sure about 10m performance
>
> Do you have any experience with this device?
> do you know the problems with 28V on driver transistors in Kenwood?
> or do you know the gain.bandwidth for it
>
> A local suggestion is to use 12V devices and run the driver with an
> extra 7812 regulator, a suggestion I do not like at all
>
> sorry, fogot which transceiver it was
>
> 73
> Jan-Martin
> --
> remove ,xnd to reply

670. LT2S wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 10:03:19 UTC
From: iw1arb <iw1arb@hotmail.com>
Message-ID: <a2jdd7$sk6$1@serv1.iunet.it>
Source record: 47062

[No readable article body recovered]

671. wanted LT2S

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 10:05:06 UTC
From: iw1arb <iw1arb@hotmail.com>
Message-ID: <a2jdgj$t4d$1@serv1.iunet.it>
Source record: 47063

[No readable article body recovered]

672. Re: DR. KING DAY: AFFIRMATIVE ACTION NEEDED IN HAM RADIO!!!!!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 12:03:49 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <IWe38.2063$Ph2.360611@news2-win.server.ntlworld.com>
Source record: 47066

> My ideas of remedies for past discrimination include
> DROPPING THE CODE REQUIREMENT FOR MINORITY APPLICANTS
> and possibly WAIVING SOME SECTIONS OF THE EXAMS. Such remedies are a way
to
> ensure an integrated society of amateurs and allow equal opportunity.
Numerical
> goals for admission to our great hobby is necessary to integrate a hobby
> traditionally closed to minorities because of discrimination. At a time
when
> our hobby needs a shot in the arm, these kind of policies might help in
> increasing our numbers and preserving our power to demand that no more of
our
> frequencies be taken away. Any THOUGHTFUL replies are welcomed."
========
IMHO ,implementing the above proposal would constitute the worst form of
discrimination.
If people are really interested in the hobby of Ham Radio ,whatever their
colour or creed , they will be able to get a licence by studying basic
electronics and operating procedures and I am sure most elmers and clubs
are prepared to assist anybody with the required study ,either individually
or in a group. However the prospective hams MUST show at least an INTEREST
in the hobby to succeed.
I feel that's where the problem is ...true interest in any hobby seems to
be dwindling fast in our "comsumers' society" . Not just in the USA but in
many other countries ,also in Europe. The Key word is 'interest' which
can be best stimulated during the school years either by the school
curriculum or through extra-curricular activities. The ARRL's "BIG
Project" is in my opinion a superb way to reverse the trend and will ,no
doubt, be a stimulus for many to embrace Ham Radio , irrespective of their
ethnic or social background .

Frank gm0csz.kn6wh@ntlworld.com

673. Re: DR. KING DAY: AFFIRMATIVE ACTION NEEDED IN HAM RADIO!!!!!!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 12:55:04 UTC
From: Curtis Scholl <cscholl@izzy.net>
Message-ID: <3C4D6128.38BCBA3B@izzy.net>
Source record: 47064

I think I saw this last year about the same time. It generated a lot of rancor and bad feelings. Respond at your own risk.

Curtis Scholl
KG8SU

Crt4239 wrote:
>
> In honor of Dr. Martin Luther King Day, I am reposting my brief honest
> editorial in his honor. Any THOUGHTFUL (yes, that means non-racist) replies
> are certainly welcome.
> *******

674. Large 50-0-50 Microammeter Panel Meter & Box - Ebay

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 13:47:14 UTC
From: Dan Long <w4tq@mindspring.com>
Message-ID: <a2jr0j$89a$1@slb3.atl.mindspring.net>
Source record: 47065

Large 50-0-50 Microammeter Panel Meter & Box - Ebay

This is a superb meter that measures 50 microamps either side of 0. It is shielded and is made by API. It has a beautiful movement, and works perfectly (just checked it today). This is a large meter with a 5.5 x 4 inch face.

It is mounted in a deluxe enclosure, with a hinged top, banana type connectors, and rubber legs. The enclosure is approximately 7 x 7 x 7 inches. The enclosure has superficial scratches in the paint (for a perfect appearance, I would repaint the enclosure).

For auction on Ebay, click on:
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1691323103

I will be glad to provide additional information. Contact me at w4tq@mindspring.com

675. Re: DR. KING DAY: AFFIRMATIVE ACTION NEEDED IN HAM RADIO!!!!!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 15:44:15 UTC
From: knox_k@nemaine.com
Message-ID: <3c4d88b8.2351175@news.nemaine.com>
Source record: 47067

On Tue, 22 Jan 2002 12:03:49 -0000, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>
>> My ideas of remedies for past discrimination include
>> DROPPING THE CODE REQUIREMENT FOR MINORITY APPLICANTS
>> and possibly WAIVING SOME SECTIONS OF THE EXAMS. Such remedies are a way
>to
>> ensure an integrated society of amateurs and allow equal opportunity.
>Numerical
>> goals for admission to our great hobby is necessary to integrate a hobby
>> traditionally closed to minorities because of discrimination. At a time
>when
>> our hobby needs a shot in the arm, these kind of policies might help in
>> increasing our numbers and preserving our power to demand that no more of
>our
>> frequencies be taken away. Any THOUGHTFUL replies are welcomed."
>========
>IMHO ,implementing the above proposal would constitute the worst form of
>discrimination.
>If people are really interested in the hobby of Ham Radio ,whatever their
>colour or creed , they will be able to get a licence by studying basic
>electronics and operating procedures and I am sure most elmers and clubs
>are prepared to assist anybody with the required study ,either individually
>or in a group. However the prospective hams MUST show at least an INTEREST
>in the hobby to succeed.
>I feel that's where the problem is ...true interest in any hobby seems to
>be dwindling fast in our "comsumers' society" . Not just in the USA but in
>many other countries ,also in Europe. The Key word is 'interest' which
>can be best stimulated during the school years either by the school
>curriculum or through extra-curricular activities. The ARRL's "BIG
>Project" is in my opinion a superb way to reverse the trend and will ,no
>doubt, be a stimulus for many to embrace Ham Radio , irrespective of their
>ethnic or social background .
>
>Frank gm0csz.kn6wh@ntlworld.com
>

I agree! I get pretty sick of that something-for-nothing syndrome!
>
>

676. RF in Microphone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 18:33:35 UTC
From: Scott McClements <yetbbwa@grove.iup.edu>
Message-ID: <3C4DB07B.74DD025D@grove.iup.edu>
Source record: 47068
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Hello,

I have a Astatic TUG-9 Stand and a D-104 head that I put a electret condensor element into. There isn't any pre-amp circuit and I power the element from a 9 volt in the mic base. I am getting RF into the mic that is causing distortion on the transmitted audio - I know it for sure because it happens when I turn the RF power up. I don't have the problem with the stock microphone. I have used bypass capacitors across the lines leaving the microphone and still have them problem - what else can I try? I have grounding bus and < 1/4 wavelength grounding strap to ground (basement station).

Thanks,

Scott.

677. Re: Phasing SSB rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 18:39:17 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <9pbr4u4ij9k0t9bnuq6dihivjsmm4qd7vh@4ax.com>
Source record: 47069
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

On Sat, 19 Jan 2002 18:47:20 -0800, "Jim Pennell" <NoSpam@killspam.com> wrote:
> It seems to me that a DSP ought to be able to take the audio waveform and
>use a DDS to generate the actual SSB output signal and dispose of filter and
>mixers and carriers for that matter.
>
> Of course, there is the minor problem of spurs on the DDS and also the
>upper frequency limit of a DSP system used in this fashion.... Still, I
>wonder what the performance would be, spur level and frequency limit.
>
> I have no way to judge, since I have little experience in this, but I am
>interested in seeing if anyone in the group might be able answer.

DSP speed limits you to a frequency in the low tens of kilohertz range,
but a DDS isn't needed since the DSP can generate the carrier directly
via indexing into a sine lookup table. This is the way SSB is generated
in several modern amateur transceivers.

Now a hybrid system doesn't have the frequency limitation posed by
DSP speed. If you do the I and Q audio in DSP, the carrier with a hardware
DDS (followed by suitable cleanup PLLs for the main and quadrature channels),
and mix in a traditional pair of balanced mixers, you can operate directly on
virtually any frequency.

Rick Campbell's R2 and T2 updated with DSP for the audio is an example
of this sort of design. I've built this sort of transmitter and receiver, and there
was an article in QST a while back outlining a similar system. Performance
is limited primarily by how well the analog balanced mixers are matched
(and you can tweak the code to compensate for some imbalance).

Gary

678. Re: RF in Microphone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 18:48:06 UTC
From: k5dh@raytheon.com
Message-ID: <Gti38.30$Bd4.318@dfw-service2.ext.raytheon.com>
Source record: 47070
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Hi Scott,

Here are some suggestions, some of which you may have already
tried, but I can't tell from original message:

- Use shielded wire for all audio connx inside the mic.
- Put a bypass cap on the positive battery lead.
- Put ferrite beads on the mic audio and PTT leads inside the
mic plug, right where the wires are soldered to the pins.
- Verify that the shield on the mic audio lead in the cable
has not opened up on you.

Questions for you:

- Does the stock mic have a dynamic element or an electret?
- Where have you installed bypass caps? What value?

73,
Dean, K5DH
Visit my amateur radio web site at http://www.qsl.net/k5dh

In article <3C4DB07B.74DD025D@grove.iup.edu>, yetbbwa@grove.iup.edu says...
>
>Hello,
>
>I have a Astatic TUG-9 Stand and a D-104 head that I put a electret
>condensor element into. There isn't any pre-amp circuit and I power the
>element from a 9 volt in the mic base. I am getting RF into the mic that
>is causing distortion on the transmitted audio - I know it for sure
>because it happens when I turn the RF power up. I don't have the problem
>with the stock microphone. I have used bypass capacitors across the
>lines leaving the microphone and still have them problem - what else can
>I try? I have grounding bus and < 1/4 wavelength grounding strap to
>ground (basement station).
>
>Thanks,
>
>Scott.

679. Re: DR. KING DAY: AFFIRMATIVE ACTION NEEDED IN HAM RADIO!!!!!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 19:06:35 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C4DB83B.67D79FEB@clifto.com>
Source record: 47071

Curtis Scholl wrote:
> I think I saw this last year about the same time. It generated a lot of
> rancor and bad feelings. Respond at your own risk.

Well, it's certainly obvious that facts won't change their minds.

--
Remember, "close" counts in horse-shoes, hand-grenades and nuclear warfare,
but in spamming, it's considered unnecessary precision. -- Alun Jones

680. Web tutorial on toroids?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 19:15:24 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C4DBA4C.2741F706@clifto.com>
Source record: 47072

I ask one stoopid question on toroids and people are breaking loose with all sorts of questions. It seems to me there's a need for a web tutorial on using toroids (especially winding coils and transformers with them); anyone know of any good ones? I didn't find any in my quest, just enough scattered (and conflicting!) information to half-answer my questions.

If we can't find one, I have the time and inclination to write one if I can get some knowledgable help. As mentioned before, I know next to nothing about the subject.

--
Remember, "close" counts in horse-shoes, hand-grenades and nuclear warfare, but in spamming, it's considered unnecessary precision. -- Alun Jones

681. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 19:21:50 UTC
From: k7itm@aol.com
Message-ID: <3200347.0201221121.3d0b5f60@posting.google.com>
Source record: 47073

Well, both actually, and daylight as well. But your point is well
taken, and I'll pay closer attention to that next time I have a
problem with one. Thanks for the comment!

Cheers,
Tom

"Mike" <m.j.willis @rl.ac.uk> wrote in message news:<a2gj97$11og@newton.cc.rl.ac.uk>...
> > But even with good color vision, I have
> > trouble with some color-coded resistors: some of the manufacturers
> > use a "red" that looks very "red-orange" -- and others use an "orange"
> > that's shaded awfully far toward red. Those are the two that give me
> > the most trouble, and it's no use trying to get the "multiplier" band
> > from context as you often can the first two (or three, for 1%) digits.
> >
>
> Do you read them under tungsten filament lights or fluorescent lights? Like
> with cloths, It makes a big difference.

682. Re: RF in Microphone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 19:26:10 UTC
From: Yee-Haw <BogusSpambotAddress@aol.com>
Message-ID: <G%i38.1958$ps.216404@news.direcpc.com>
Source record: 47074
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Go to www.heilsound.com and look around. I was reading some information on there yesterday about grounding microphones. Hope this helps.

K5DH <k5dh@raytheon.com> wrote in message news:Gti38.30$Bd4.318@dfw-service2.ext.raytheon.com...
> Hi Scott,
>
> Here are some suggestions, some of which you may have already
> tried, but I can't tell from original message:
>
> - Use shielded wire for all audio connx inside the mic.
> - Put a bypass cap on the positive battery lead.
> - Put ferrite beads on the mic audio and PTT leads inside the
> mic plug, right where the wires are soldered to the pins.
> - Verify that the shield on the mic audio lead in the cable
> has not opened up on you.
>
> Questions for you:
>
> - Does the stock mic have a dynamic element or an electret?
> - Where have you installed bypass caps? What value?
>
> 73,
> Dean, K5DH
> Visit my amateur radio web site at http://www.qsl.net/k5dh
>
> In article <3C4DB07B.74DD025D@grove.iup.edu>, yetbbwa@grove.iup.edu says...
> >
> >Hello,
> >
> >I have a Astatic TUG-9 Stand and a D-104 head that I put a electret
> >condensor element into. There isn't any pre-amp circuit and I power the
> >element from a 9 volt in the mic base. I am getting RF into the mic that
> >is causing distortion on the transmitted audio - I know it for sure
> >because it happens when I turn the RF power up. I don't have the problem
> >with the stock microphone. I have used bypass capacitors across the
> >lines leaving the microphone and still have them problem - what else can
> >I try? I have grounding bus and < 1/4 wavelength grounding strap to
> >ground (basement station).
> >
> >Thanks,
> >

> >Scott.
>

683. Re: RF in Microphone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 19:36:10 UTC
From: Your Friend Bill <"Remove The NO In The Reply To Address"@coqui.net>
Message-ID: <3C4DBF2A.9DA27EBD@coqui.net>
Source record: 47075
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

> In article <3C4DB07B.74DD025D@grove.iup.edu>, yetbbwa@grove.iup.edu says...
> >
> >Hello,
> >
> >I have a Astatic TUG-9 Stand and a D-104 head that I put a electret
> >condensor element into. There isn't any pre-amp circuit and I power the
> >element from a 9 volt in the mic base. I am getting RF into the mic that
> >is causing distortion on the transmitted audio - I know it for sure
> >because it happens when I turn the RF power up. I don't have the problem
> >with the stock microphone. I have used bypass capacitors across the
> >lines leaving the microphone and still have them problem - what else can
> >I try? I have grounding bus and < 1/4 wavelength grounding strap to
> >ground (basement station).
> >
> >Thanks,
> >
> >Scott.

Is it a coiled cord? In my case running a direct wire from the plug at
the rig to a common gnd inside the mic solved the problem. Don't know
if it was simply poor shielding or possibly some resonance due to the
cord. Anyway, it fixed it. (D104 + IC-745 barefoot)
-Bill WX4A

684. Re: Web tutorial on toroids?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 20:45:51 UTC
From: Mike Hall <mghall@enteract.com>
Message-ID: <3C4DCF7F.946E9E90@enteract.com>
Source record: 47076

"Clifton T. Sharp Jr." wrote:

> It seems to me there's a need for a web tutorial on using toroids
> (especially winding coils and transformers with them);
> anyone know of any good ones?

It's not a web page, but it's a good book:

Ferromagnetic Core Design & Application Handbook
M.F. "Doug" DeMaw

Printed by MFJ, runs about 250 pages, costs about $20,
can be found on Amazon and other book sellers.

--
Mike Hall
http://www.enteract.com/~mghall
AB9CO EN51VT

685. Re: Salvage Parts from a Microwave ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 21:14:51 UTC
From: John Fletcher <John@kanga.demon.co.uk>
Message-ID: <ncuAhBALZdT8EwkN@kanga.demon.co.uk>
Source record: 47077

How about using the whole cabinet (if it survived the fire) as a Faraday
cage for receiver tests? Put some N or BNC connectors through the wall.
Run the lamp from an internal battery so you can read the mV meter.
Blank off the mains input socket. I built my Faraday cage because my
microwave still works...

John G4EDX

>==========
>Components worth salvaging ...
>1) Fine mesh screen in door (excellent for RF screening)
>2) High Voltage diode
>3) High voltage capacitor
>4) Hi Temperature Sleeve insulation low voltage winding transformer + copper
>wire
>5) Hi Voltage 2 button toggle switch (often seen in older models) I have
>one rated 2600 V
>6) Rotating glass plate (if fitted)
>7) (Self tapping) Screws ,bolts & nuts
>8) Power plug and cord
>9) Any components ,being part of display unit

--
John Fletcher

686. Re: Homebrew Keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 21:36:09 UTC
From: Skipp <skipp@pilotNOSPAMPLEASE.ucdavis.edu>
Message-ID: <a2km09$ml8$1@woodrow.ucdavis.edu>
Source record: 47094

Hi Michael,

It really wouldn't make a lot of sense to design and produce a new setup
as the market is flooded with them now. Plus those original Heathkit
uMatic (micro matic) keyers are all over Ebay. I have one myself and they
work pretty well. I still prefer my vintage original Ham Radio Outlet one
knob keyer though.

73's
skipp
http://sonic.ucdavis.edu

: KU4YP <ku4yp@earthlink.net> wrote:
: hello all,

: i saw a neat homebrew keyer/paddle combination and wanted to ask if anyone
: has plans for one? something like the heathkit keyer/paddle unit.

: any help appreciated.
: --
: 73 de KU4YP "There is no spoon......"
: Michael Prevatt
: Willow Oak, Florida 10X #70625
: Active HF/VHF/Digital 10X International Net

687. Re: wanted LT2S

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 22:23:56 UTC
From: la8ak.xnd@online.no
Message-ID: <3c4de61a.97531092@news.online.no>
Source record: 47078

On Tue, 22 Jan 2002 11:05:06 iw1arb repeated his message:

>
>
>

--
remove ,xnd to reply

688. Re: 2x 2SC2333 as driver in Kenwood transceiver?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 22:23:56 UTC
From: la8ak.xnd@online.no
Message-ID: <3c4de369.96841270@news.online.no>
Source record: 47079

On Tue, 22 Jan 2002 10:35:51 +0100, Val <val_a20@hotmail.com> wrote:

>Hi Jan-Martin.
>(Answer in English. Do not think the rest of the world
>would like a Scandinav-mix language).
>
>This is in the TS930, isn't it?
>MRF485 = Dritt!
>
>No additional data available in MWO, ADS or my Motorola
>handbook (to old?). Only rudimentary info found. Strangely
>enough, it is specified Vceo[max] = 25V, not 28V. If this
>is the problem, the MTBF sucks, and the Kenwood engineers,
>well...
>I do not know if MRF485 is EXACTLY as 2SC1307, but they are
>said to be replaceable. This is often used as PA in CB (27 MHz)
>equipment (yuck!), and usually fed with 12V (possible cause of
>proposal to use 7812??). Perhaps it's easier to track data of
>this one (I have not made any serious effort!).
>
>Best regards/treoghalvfjers (73 in Danish)
>V
I might mix-up 2SC1307, which seems to be the one LA4BL used in his
TS-850(?). Think it is stupid to use 12V transistors and convert the
power supply, a much better solution for TS-930 is to use a very
simple 24V regulator for MRF485 devices

The Motorola RF Device Data book is marked "Aalborg University" - so
it should be reliable, it says V(BR)CE0=35V

73
LA8AK
--
remove ,xnd to reply

689. Re: wanted LT2S

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-22 22:24:37 UTC
From: la8ak.xnd@online.no
Message-ID: <3c4de649.97578071@news.online.no>
Source record: 47080

On Tue, 22 Jan 2002 11:05:06 iw1arb repeated his message:

>
>
>

--
remove ,xnd to reply

690. DO NOT FEED THE TROLLS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 00:01:08 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C4DFCE0.77DE@pop.removethistomailme.net>
Source record: 47081

>I think I saw this last year about the same time.
>It generated a lot of rancor and bad feelings.

Which is exactly what it was intended to do.

>Respond at your own risk.

Or not at all. What a concept, huh? :)

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

691. Homebrew Stuff for the Disabled, Elderly Ham.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 00:08:33 UTC
From: wa8mea@hotmail.com
Message-ID: <8a260fb2.0201221608.6dbea00c@posting.google.com>
Source record: 47082

Here is a site that has assembled, homebrew type stuff that's a lot of fun to operate! Great for hams who are disabled and elderly and not able to "roll their own". Heck...the gadgets are fun enough and low cost enough for ANY ham!

-40 meter QRP transmitter
-Active antenna
-Antenna tuner
-Portable Dipoles

And more! Just click:

http://qth.com/dwm

692. Re: Big question.... Torodes?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 00:24:33 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u4s0o6ovbdfd02@corp.supernews.com>
Source record: 47083

"Kc7eip" <kc7eip_nospam@shaw.ca> wrote in message
news:Xns919DDCBB734CAkc7eipshawca@24.64.223.211...

> Yes radio shack canada only carries a fraction of the parts as radioshack
> us.. but will check there for sure... and thanks for the info on the
cores
> i am understanding a little better.. will try the t-50s but if it does
not
> work no loss i suppose i will buy the premade inductor...

http://www.radioshack.com isn't much like the store. The stores do not carry toroids. However, rs.com's price is not a lot different than Amidon or Palomar Engineers, but their shipping is better. They are, however, packaged in lots of 3 or 4 depending on the size and mix. At Palomar Engineers you can buy 1, but the total shipped price will be higher.

> :) Yes an american ham in canada... Luckily with the recent change in

Ah, so you DO have the shipping/customs challenges. Well, maybe it's not so cheap then. I just don't know what you need to deal with. Even so, if you only need one mix, diz may be better. He will sell you 25 T50-2's for $6 plus $3 shipping (plus whatever the deal is getting into Canada). 4 T50-2's at rs.com are 4.80, with shipping at 2.50. so an extra buck and a half from diz gets you 21 cores for future products. Who knows what the international shipping will do to you, tho.

..

693. Re: DO NOT FEED THE TROLLS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 00:47:49 UTC
From: Chip Griffin <n1mie@NOSPAM.snet.net>
Message-ID: <220120021947483342%n1mie@NOSPAM.snet.net>
Source record: 47084

In article <3C4DFCE0.77DE@pop.removethistomailme.net>, John Miles
<jmiles@pop.removethistomailme.net> wrote:

] Or not at all. What a concept, huh? :)

It didn't stop you ... :)

--
N1MIE - FN31xm

694. H-Mode mixer inquiry

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 02:33:26 UTC
From: BarryG <bgNOSPAM@albany.net>
Message-ID: <Mhp38.583$17.471663@newsfeed1.thebiz.net>
Source record: 47085

I'd appreciate any info on pc boards that might be available for receiver front ends that incorporate an H-Mode mixer, per G3SBI.

Tnx/73,
Barry N1EU

695. Re: H-Mode mixer inquiry

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 03:14:23 UTC
From: "Harold E. Johnson" <W4ZCB@Home.com>
Message-ID: <jUp38.18396$Pj4.3556811@news2.nash1.tn.home.com>
Source record: 47086

> I'd appreciate any info on pc boards that might be available for receiver
> front ends that incorporate an H-Mode mixer, per G3SBI.

I have some that sandwich the mixer with a synchronous divider 4 thru 18.

W4ZCB

696. Re: RF in Microphone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 03:55:53 UTC
From: spagnet@austin.rr.com
Message-ID: <dvq38.31040$XZ1.1637898@typhoon.austin.rr.com>
Source record: 47087
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Could you install an RF choke on the 9V line and bypass to ground (as you did) and loop the whole thing through a small ferrite bead 2 or 3 times?

KI5XW

"Scott McClements" <yetbbwa@grove.iup.edu> wrote in message news:3C4DB07B.74DD025D@grove.iup.edu...
> Hello,
>
> I have a Astatic TUG-9 Stand and a D-104 head that I put a electret
> condensor element into. There isn't any pre-amp circuit and I power the
> element from a 9 volt in the mic base. I am getting RF into the mic that
> is causing distortion on the transmitted audio - I know it for sure
> because it happens when I turn the RF power up. I don't have the problem
> with the stock microphone. I have used bypass capacitors across the
> lines leaving the microphone and still have them problem - what else can
> I try? I have grounding bus and < 1/4 wavelength grounding strap to
> ground (basement station).
>
> Thanks,
>
> Scott.
>
>
>

697. Re: DR. KING DAY: AFFIRMATIVE ACTION NEEDED IN HAM RADIO!!!!!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 05:02:59 UTC
From: Glenn Butzlaff <gbutzlaff@wi.rr.com>
Message-ID: <sDr38.1777$h51.539880@twister.kc.rr.com>
Source record: 47089

Crt4239 <crt4239@aol.com> wrote in message
news:20020121223922.22658.00002909@mb-mi.aol.com...
> In honor of Dr. Martin Luther King Day, I am reposting my brief honest
> editorial in his honor. Any THOUGHTFUL (yes, that means non-racist)
replies
<snip>

Nice troll!!! This one should get an award.

Glenn Butzlaff, WE9K

698. Re: Will it...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 05:13:39 UTC
From: JAMES HAMPTON <j.r.hampton@worldnet.att.net>
Message-ID: <7Er38.114460$fe1.2208621@bgtnsc06-news.ops.worldnet.att.net>
Source record: 47088
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

Might do wonders for the high voltage probe! ;-)

73 from Rochester, NY
Jim AA2QA (finally got a chuckle out of this newsgroup!)

"rasw" <atdot.dotat@at.sorry> wrote in message
news:a2hf8g$3guvb$1@rn.area.com...
> ...make my ANTENNA bigger too?
>
>
> "Walt Davidson" <walt99@tiscali.co.uk> wrote in message
> news:95eo4u4eg2t2n303o7sam8jtpb25jk6a19@4ax.com...
>
> > Is there anyone from the age of 12 upwards who does not already have
> > first hand knowledge (and I choose my words carefully) of this
> > "amazing exercise system"?
> >
>
>

699. Re: Big question.... Torodes?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 05:36:34 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0201222136.1b54cd4e@posting.google.com>
Source record: 47090

Kc7eip <kc7eip_nospam@shaw.ca> wrote in message
news:<Xns919D9289785FBkc7eipshawca@24.64.223.211>...
> Well at my location the supply of torodes are verry slim infact the only
> ones in stock are t50-6...I need two t50-2 and one t37-6 i believe the
> first two are for an swr/antenna tunner project the latter is to make an
> inducter for 40 meters... please forgive my lack of knowledge but is there
> an easy way to figure out the required turns for use on the t50-6 for both
> the projects or is this not really possible.. I could mail order the
> required ones but i only need three and the large numer i would need to
> order from online is over kill for me...

On the issue of ordering, there is a thread about where to get toroids
in Canada on the RAC (Radio Amateurs of Canada) messageboard right now:
http://rac.eton.ca/data/racdiscs.taf?

Nobody could come up with a real good source in Canada. Someone suggested
Electrosonic in Toronto, but I thought they had a stiff minimum order
requirement.

When it's come up here before, I thought people have suggested
local outlets, that also happened to do mail order. I seem to
recall Laura suggesting a place in Vancouver.

Dan's Small Parts, I'm sure I posted the URL over at the RAC
messageboard, may be one of the better options, because the
"shipping and handling" isn't too dear, and if there is a minimum
order, it's quite low. If there are some other RF components
you want or need, he's worth looking into.

Someone over there suggested Amidon itself. I'm not sure
of their policy to Canada, but it is a useful suggestion since
they went into business at a time when toroids were fairly new,
and their market was those who needed them in small quantities.

Someone suggested Radio Shack. From a recent thread elsewhere,
I gather that you cannot order from the US website, you have
to use http://www.radioshack.ca if you're in Canada. And I suspect
they don't carry toroids.

I'm not sure the people in the US realize that not only do we
have to deal with higher shipping prices in many cases, along
with duty at the border, but the fact that the Canadian dollar
is worth something like 64 cents American means that what starts
out as a fairly reasonable price gets quite a bit higher by
the time we send off the money.

Michael VE2BVW

700. Re: Homebrew Stuff for the Disabled, Elderly Ham.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 07:18:28 UTC
From: BFHawkins <not@aol.com>
Message-ID: <3c4e63c3$0$37099$ac966d11@news.raex.com>
Source record: 47091

Bill <wa8mea@hotmail.com> wrote in article
<8a260fb2.0201221608.6dbea00c@posting.google.com>...
> Here is a site that has assembled, homebrew type stuff that's a lot of
> fun to operate! Great for hams who are disabled and elderly and not
> able to "roll their own". Heck...the gadgets are fun enough and low
> cost enough for ANY ham!
>
> -40 meter QRP transmitter
> -Active antenna
> -Antenna tuner
> -Portable Dipoles
>
> And more! Just click:
>
> http://qth.com/dwm
>

Hi Bill and Group!

I would like to add that the Elecraft site www.elecraft.com lists many
"Builders for Hire" that will build an Elecraft kit at no charge (except
for the basic cost for the kit) for those who cannot.

Happy Hamming.

Best to all.

BFHawkins
KO0K

701. SMT hot air soldering - RFC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 07:22:51 UTC
From: Gollywog <_eng@ilos.net>
Message-ID: <fxt38.583$8i2.18591@news2.mts.net>
Source record: 46950

Anybody/Everybody:

How come nobody every asks "How do I solder these damn surface mount parts"? Seems everybody would want to know how everybody else is managing to pull it off without massive frustration, wrecked parts, blurry vision, etc. Did someone just forget to tell me again?

I've been collecting parts from the local surplus store (i.e. Princess Auto) I'm just about ready to take a rip at building a machine. I'm hoping there are a few people here who have fooled around with this enough to have some useful suggestions.

Here's what I've collected for parts:

1. The stuff for a 24V, 25A power supply. This includes two 12V, 25A transformers, a +12V and a -12V regulator, eight NPN and eight PNP power transistors, sixteen 0.1 ohm emitter equalization resistors, twenty 4700uF 50V capacitors, etc. I've used these same parts successfully in a 25A @ +12V variation of an ARRL handbook circuit (which claimed >10A @+28V) so I'm going to try to get away with simply a positive one and a negative one (with PNP pass transistors) and hope the impedance presented to the wall from the two parallel primaries doesn't turn my lights out. Anybody have a suggestion for an in-rush current limiter for when I hit the power switch?

2. A Curtis PMC 1505 pulse modulation power controller (originally intended for electric wheelchair/mo-ped use). The data sheets say 20A continuos, 80A for up to 1 minute (at 24V). I'm going to trim my heating element (see below) for about 500W max so this should give me good control over the heating power.

3. A heating element (which looks like it might have been made for a small kitchen oven originally) which says 1500W at 117VAC. It's got a nice removable/reusable power connector and the element material cuts fairly cleanly and easily. I haven't fooled around with it much, but I suspect my biggest problem is going to be the low resistance, high strength, super-high temperature connectors which I'll need to connect the segments I'm going to cut. I'm not sure what I'm going to do for a thermal insulator where the element assembly bolts to the frame either.

4. A length (4ft at the moment) of 1/8" (inner diameter) copper tubing which winds easily around the heating element with only minimal obstruction to the air flow through it.

5. A tube (a pair of tubes actually) of JB Weld. Looks like epoxy glue, one tube says "steel" the other "hardener". The package says "max temperature is 600 degrees F." and "does not conduct electricity".

6. A 12V air pump (originally made for a car accessory which allowed you to inflate the tires using the cigarette lighter). I've even got a spare one if I need it. They do have a nice pressure gauge attached (goes up to 200psi) but no pressure shut off, etc.

7. A copper welding tip normally used with an oxy-acetylene welding system. It has a female end which mates fairly well with my copper tubing (i.e. a bit of JB Weld should do it).

8. A 30" linear slider with motorized screw. It looks like it might have been from a scanner, copier, etc originally. I've got a spare but I'm leery of trying to use them both together since the "model car" motors driving the screws would be difficult to control. I also have a pair of dresser drawer sliders with about the same length of travel.

9. Assorted valves and connectors (including a nice assembly with four solenoids controlling a one-in four-out air flow distributor).

I've got my eye on the parts below and I'm just waiting for the "clearance price" that's probably coming soon.

10. A pressure tolerant plastic "bottle" with two airways through the cap. The one I'm looking at already has the piece of tubing running from the inside of the cap to the bottom of the bottle on the air-in hole. I'm thinking I'll run the power for the immersion heater (see below) and the connecting wires for the water temperature probe (see below) inside the air-out plastic tubing (i.e. through the other tube). Once the wires are outside the bottle I'll use a Y tubing connector and silicon caulking (and maybe a screw clamp of some sort) to get them out of the pressurized system.

11. An immersion heater which might have been designed for a kitchen kettle originally. It's 117VAC but till I buy it I'm not too sure of the wattage. For this initial version I'm thinking a triac/diac power control to manage the input power by hand. The circuit in the triac datasheets looks quick and painless.

12. A means of determining water temperature (between 20 and 110 degrees C). Eventually I'll want whatever is controlling the immersion heater to be monitoring the water temperature, but for the time being I'm going to use a thermometer probe with attached LED readout circuitry which is small enough to fit right inside the bottle (if I can figure how to mount it). I'm simply going to run it's 12V supply into the bottle and read the display through the bottle wall. This is going to be a pretty steamy environment so I'm thinking I'll wrap the circuitry in plastic wrap or something before it goes in.

13. A pressure sensor with hystersis and associated circuitry to stop and start the 12V air pump(s). I'll probably make this the very first thing I add after I prove to myself that this thing will actually solder parts. Till then I may just flip the power on and off and watch the pressure gauge(s). Why did that sound so much like famous last words?

14. Last but not least - an over pressure release valve of some sort. The pressurized system as a whole will no doubt leak like a sieve long before it

reaches dangerous pressure levels, but it's hard to come up with a good reason not to include it.

In a nutshell the procedure would be:

1. Spend as much time as necessary staring through the magnifying lens, syringe in one hand dental pick in the other, applying solderpaste to three or four pads (/pins) at a time.

2. Take the board out from under the lens and mount it on the linear tracking "table". At this point I don't have any good hardware to allow me to fine tune the position in two directions but some kind of XY adjuster system would be ideal. For the time being I thought I could provide a fairly long "base beam" running perpendicular to the sliding direction. The position on the beam where the board was clamped would determine one axis. The base beam would also contain a long bolt extending through the beam parallel to the sliding direction. The bolt could be move "in and out" to determine just how much linear sliding occurred before an end-of-travel switch killed the screw motor. This should allow accurate, repeatable control over the other axis.

3. Make sure the water temperature and bottle pressure are at the right initial levels (i.e. as determined from experience).

4. Open the air flow out of the bottle toward the heating element.

5. Crank up the power to the heating element. Again experience would determine the correct level.

6. Wait a predetermined amount of time for the heater element and all that copper to warm up. At some point the air pump(s) will probably need to be cut in to bring the pressure back up. This will no doubt have a large impact on water temperature as the room temperature air is bubbled through. This part will take some practice.

7. Close the airflow from the bottle to the heating element. At this point the heating element power is at max and the air stuck in the copper tubing should be getting very hot very fast. It is probably going to be the case that the air pump(s) will be running at this point so the pressure in the system will be near maximum when the airflow is re-opened.

8. Bring the linear tracking "table" under the tip. In a future version I may use a small drill-press assembly with a motor and clutch of some sort to bring the tip down toward the board once the linear table reaches maximum travel. For this version I'm thinking I'll assemble boards starting with the inner most components and working outward. This way the tip would not have to pass over any parts during the linear tracking and could be set just high enough to clear the leading edge of the part being soldered.

9. Open the airflow from the bottle to the tip. The initial blast of air coming out of the tip should be hot enough to melt solder paste. There should be enough energy in the stream (from the moisture content) to effectively heat the pins, tabs, etc as well for a proper joint. Right?

10. Kill the power to the heating element.

11. Close the airflow from the bottle to the tip and restore pressure to the initial levels needed for the next round.

12. Restore the linear tracking table to it's initial position. If it looks like a success it's back to the lens, syringe, and dental pick. Otherwise it's back to step 3 for another blast.

Suggestions appreciated,

Mike Whitfield (VA4MGW)

```
********* \\\\lll//// *********
********** \ -- -- / **********
*********** (\@ @/) ***********
*** --oOOOo---(_)---oOOOo-- ***
```

702. Re: What parameters yield highest toroid Q

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 07:30:37 UTC
From: BFHawkins <not@aol.com>
Message-ID: <3c4e669c$0$37099$ac966d11@news.raex.com>
Source record: 47092

Jake Brodsky <frussle@erols.com> wrote in article
<ukjp4ugpolucpitm1gcq5eddup6d74omgd@4ax.com>...
> Ok, I know this is a very broad question, but I'm curious what
> combinations people have used.
>
> For example, I've read that 17 turns of #18 wire on a T-68-6 core will
> yield a Q of nearly 400 at around 10 MHz. That's off the charts of
> the literature Amidon distributes.
>
> First, is this a realistic Q figure?
>
> Second, if this is realistic, can I scale this performance to an
> inductor on another frequency, using materials such as #2 or #7? All
> other parameters such as toroid size, wire size and number of windings
> can change, I'm primarily looking for the combinations which will
> yield the highest Q at some HF frequency.
>
> Third, there must be more complete references on this subject than the
> literature Amidon gives out for free; does anyone have suggestions?
>
> Thanks in advance and 73,
>
> Jake Brodsky, AB3A mailto:frussle@erols.com
> "Beware of the massive impossible!"
>

Hi Jake and Group!

You might want to check our the "Technical Correspondence" in the Feb 2002
QST for the article by Grant Bingeman, KM5KG. He states that the "Q" of
toroidal inductors can be drastically increased by using "contra-wound"
toroidal windings on an air core. I don't know what he means, but his email
is given as DrBingo@compuserve.com

Best to all.

BFHawkins
KO0K

703. Free parts for new homebrewers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 07:51:47 UTC
From: k7itm@aol.com
Message-ID: <3200347.0201222351.768a3622@posting.google.com>
Source record: 47093

Any new-ish homebrewers out there, or perhaps Elmers getting new people started, or folk trying to teach classes, who could use some free parts? I'm trying to put a bit more order into my rather large "junque box" (or is that "Stash of Trash"?), and would love to donate some parts rather than toss them into the garbage. At the moment for instance, I have about 40 SN99121P's which I believe are essentially 747/1458 type dual op amps, but I'm sure there will be quite a few 74LSxx/74ALS/74F/etc (maybe even some 74HC) digital parts, and assorted RAM (mostly static; some fast [35nsec or so] static; some dynamic) and assorted UV-eraseable proms. There may also be some analog parts, resistors and capacitors and assorted small transistors. The main catch is probably that you'd have to convince me that you actually have projects (learning and/or building) to use the parts...and be willing to pay postage or pick them up.

Any interest?

Cheers,
Tom

704. Re: bigger penis in 3 weeks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 11:43:36 UTC
From: jo <captjoejoe@uswest.net>
Message-ID: <Ilx38.117101$va.55274484@news2.rdc1.mi.home.com>
Source record: 47095
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

```
THIS TELECOPING
PNUMATIC DEVICE CAN I ELEVATE MY ANTENNA!!! with
it!!!????????????????????????????????????????
```

705. Re: Big question.... Torodes?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 12:16:50 UTC
From: " .Your Friend Bill" <none@coqui.net>
Message-ID: <3C4EA9B2.7B8FB40B@coqui.net>
Source record: 47096

Michael Black wrote:
>

> I'm not sure the people in the US realize that not only do we
> have to deal with higher shipping prices in many cases, along
> with duty at the border, but the fact that the Canadian dollar
> is worth something like 64 cents American means that what starts
> out as a fairly reasonable price gets quite a bit higher by
> the time we send off the money.
>
> Michael VE2BVW

1 Canadian dollar equals 64 US cents which equals 5 Hong Kong Dollars or
5.68 Mexican Pesos.
Its the same amount.
If your logic were true, we Yanks would be buying everything in Canada
to take advantage of that discount that allows us to get $1.60 worth of
goods for $1.00.
-Bill

706. Re: Anyone else have this problem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 12:46:44 UTC
From: becclest@pcug.org.au
Message-ID: <3c4eaae7.6263190@newshost.pcug.org.au>
Source record: 46947

On Fri, 18 Jan 2002 17:03:27 -0000, "Mike" <m.j.willis @rl.ac.uk>
wrote:

>Also, while on the subject of colour vision. Does everyone have the same
>spectral range? I.e. Where does red stop being red and become infra-red and
>is it the same for everyone?

Of my three sons, two are colour blind. Colour perception problems are
most prevalent in caucasion males (~20%) and is generally hereditary,
being passed through mothers to sons. Their mother is OK but their
maternal grandfather was also colour blind.

FWIW, I believe colour blind people have a different colour
"bandwidth" and/or range to the normal response. My youngest son would
marvel at the most "boring" sunsets and wonder what his mother and I
were on about when we talked about "spectacular" sunsets, suggesting a
spectral shift. To illustrate this point, compare a colour visible
light image and colour infrared image of the same subject. Some of the
infrared camera/gun manufacturers often hav pics on their websites or
in their ads.

But every cloud has a silver lining. Very often, clour blind people
have very acute tonal sensitivity, which is why colour blind people
are often employed as aerial photo reconnissance interpreters.

73s
Bob VK1ZRE

707. SCHEMATIC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 12:59:40 UTC
From: Branko Ribi&#65533;i&#65533; <branko.ribicic@zg.hinet.hr>
Message-ID: <a2mgjs$f9p3$1@as201.hinet.hr>
Source record: 46948

I am looking for a schematic for a XCR-30, Mk.2 radio. Made in the Republic of South Africa by Barlows Television Company. Very nice and rare concept.
73, Branko (9a2dl)

branko.ribicic@zg.hinet.hr

708. Re: SCHEMATIC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 14:39:48 UTC
From: " .Your Friend Bill" <none@coqui.net>
Message-ID: <3C4ECB34.2F191639@coqui.net>
Source record: 46949

"Branko Ribii¿½ii¿½" wrote:
>
> I am looking for a schematic for a XCR-30, Mk.2 radio. Made in the Republic
> of South Africa by Barlows Television Company. Very nice and rare concept.
> 73, Branko (9a2dl)
>
> branko.ribicic@zg.hinet.hr

Here's an XCR-30, not Mark 2
http://www.sci.fi/~ijl/xcr30sch.gif

709. Anyone have an extra FT50B-75 Ferrite Toroid Core?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 18:35:42 UTC
From: Jim <wdxp@cox.net>
Message-ID: <d70u4u0k4olmmp4rt1l1d2mja0hsmqqhdo@4ax.com>
Source record: 46951

Anyone have an extra for sale or know of a place to buy one
without a $10 minimum and $7 shipping?

Thanks,

Jim

710. Gears or Right angle drive

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 18:57:28 UTC
From: aprewitt@earthlink.net
Message-ID: <ol1u4ug916qp5br27p82co9u6b9a73lhoe@4ax.com>
Source record: 46952

Hi All,

I am looking for a right angle drive suitable for motor drive of a
vacuum variable cap.
1/4 " (+-) input & output shafts
2:1 to 10:1

Any one got something in the junk box ???

Art

711. Re: RF in Microphone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 19:27:55 UTC
From: laborkei <laborkeiNOSPAM@hotmail.com>
Message-ID: <3c4f0ea3$1_2@nopics.sjc>
Source record: 46953
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Hello Scott,

I used to have the same problem on my D104.
Whenever I turned on my Amplifier, it fed back to my audio.
The stock microphone cable was ok, so I added a Ferrite core,
and all my problems went away..

--
Keith A. LaBorde
Amateur Radio Station WD5BJQ
Web: http://www.qsl.net/wd5bjq/

Join me on the Century Club HF Nets !
Net Schedule: http://www.qsl.net/wd5bjq/netsched.htm

"I can hear you...
The rest of the World hear's you...
And the people who knocked these buildings down will hear us soon."
President George Bush - Sept 14th, 2001

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this message is not the intended recipient, you are hereby notified that any
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"Scott McClements" <yetbbwa@grove.iup.edu> wrote in message
news:3C4DB07B.74DD025D@grove.iup.edu...
> Hello,
>
> I have a Astatic TUG-9 Stand and a D-104 head that I put a electret
> condensor element into. There isn't any pre-amp circuit and I power the
> element from a 9 volt in the mic base. I am getting RF into the mic that
> is causing distortion on the transmitted audio - I know it for sure
> because it happens when I turn the RF power up. I don't have the problem
> with the stock microphone. I have used bypass capacitors across the
> lines leaving the microphone and still have them problem - what else can
> I try? I have grounding bus and < 1/4 wavelength grounding strap to
> ground (basement station).
>
> Thanks,
>
> Scott.
>
>

>

712. Re: Anyone have an extra FT50B-75 Ferrite Toroid Core?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 21:25:40 UTC
From: k7itm@aol.com
Message-ID: <3200347.0201231325.4e895a00@posting.google.com>
Source record: 46954

I have a couple FT50B-77's, but not -75. (Sorry--77 is more
attractive for switching power components.)

Cheers,
Tom

Jim <wdxp@cox.net> wrote in message news:<d70u4u0k4olmmp4rt1l1d2mja0hsmqqhdo@4ax.com>...
> Anyone have an extra for sale or know of a place to buy one
> without a $10 minimum and $7 shipping?
>
> Thanks,
>
> Jim

713. 17 meter SSB project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 22:41:57 UTC
From: n2cqr@clix.pt
Message-ID: <3c4f3bb7.757663@news.clix.pt>
Source record: 46955

. I thought you guys would like to hear about my current
project, a homebrew SSB rig for 17 meters.

Most of the design is from an article in the British QRP magazine
SPRAT (Nr.48) by Frank Lee, G3YCC (now a Silent Key). Solid State.
Manhattan style construction. Junk box parts. My version generates
the SSB at 5.173 Mhz. I had an old set of crystals from the filter
and carrier oscillator in a Swan 240. The balanced modulator uses two
diodes. After the filter there are two stages of amplification then
the signal goes to an NE-602 mixer. The oscillator here is outboard
to the NE-602. I upconvert to the operating frequency.

That's how far I've gotten at this point. I'm looking around for RF
Amp circuits that will take me up to around 25 watts. I want to stay
with 12 Volts DC. Any suggestions? Are the kits based on Motorola
circuit notesstill around? I also thought about adapting a 20 meter
amp kit that Ramsey
sells.

Once I get the TX going, I might go ahead and make this rig a
transceiver. I have plenty of room, because I'm building this thing on
the chassis of an old DX-40. I'll also use the front panel and
cabinet from the old Heath.

73 de Bill CU2JL (aka N2CQR)
Sao Miguel Island
The Azores, Portugal
37.7 N 25.6 W
http://planeta.clix.pt/n2cqr

714. Re: Dummy needs help w/grid dip meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 22:56:59 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c4f3f70.11880145@news.freeserve.net>
Source record: 46956

On Sun, 20 Jan 2002 16:17:08 -0500, WebRat@wehackz.org wrote:

>Hi all,
>
>I am in possession of a grid dip meter that I have no idea how to
>operate! I would RTM, but, there's no M to R ;) The only other ham I
>know is a off-the-shelf 2-meter only kinda fella. He tried, but
>doesn't know much more than I do about the thing.
>
>If I understand what I've found about it, here's what I do.
>
>1. install a coil to oscillate in the desired range e.g., 3.7 MHz -
>8.0 MHz for 40Meters
>2. after warm-up, adjust the output so that the meter reads at a
>setpoint on the scale.
>3. place the coil near the circuit under test (2 turns of #22 solid
>wire across the feedline of my cut-freq 7.150MHz dipole in this case)
>4. vary the freq control until there is a large change in the meter
>reading.
>
>Here's the problem; the thing has several large fluctuations across
>the range of the selected coil, none of which seem to be harmonics of
>7.15 MHz.
>
>The VSWR meter shows me 1.2:1 at 7.15MHz, so the antenna is properly
>tuned, or the swr meter is lying.
>Anyone got some help for a digital dummy attempting to climb into a
>vaccuum tube world?
>
I found this article on GDO's, perhaps it will help ...
http://www.qsl.net/iz7ath/web/02_brew/15_lab/02_dipper/pag01_eng.htm
and I thought of you ;-)
hth Mike W, G8NXD M3MSM qthr

715. Re: H-Mode mixer inquiry

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-23 23:50:54 UTC
From: Rich Griffiths <richg@one.net>
Message-ID: <3C4F4C5E.6E5380F@one.net>
Source record: 46957

Geez, guys! We put up with loads of political and other trash going by
on these newsgroups. Then two guys come along with something that
sounds *really* interesting, and they only give us one sentence each.

I have no idea what an H-mode mixer is. I crave enlightenment (please).

... Rich

"Harold E. Johnson" wrote:
>
> > I'd appreciate any info on pc boards that might be available for receiver
> > front ends that incorporate an H-Mode mixer, per G3SBI.
>
> I have some that sandwich the mixer with a synchronous divider 4 thru 18.
>
> W4ZCB

716. Cheapest Homebrew Morse Key ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 00:12:33 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c4f50db.16339533@news.freeserve.net>
Source record: 46958

Hows this for a Cheap and simple Morse Key ?

www.corn2.freeserve.co.uk/key.gif

Enjoy, Mike W, M3MSM qthr

717. Hearing aid "buzzing"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 00:31:28 UTC
From: g345cde@aol.com
Message-ID: <20020123193128.20457.00000132@mb-bg.aol.com>
Source record: 46959

Hi All:

My problem is that I have an analog hearing aid (only one good ear with aid) and have to use a digital cell phone on that ear. You know the result......high level buzz. I know there is a commercial product designed to solve the problem, but what about something home brewed ? Thanks, GHF W3ASE G345CDE

718. Schematic capture question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 02:31:00 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C4F71E4.1839C7BA@clifto.com>
Source record: 46968

Is there any schematic capture software available that moves wires along with parts, i.e. the part doesn't get disconnected from the circuit when you move the part?

Maybe I got spoiled by LabView years back, but it seems to me that software that *doesn't* do that is next to useless for anything other than pretty pictures.

--
Remember, "close" counts in horse-shoes, hand-grenades and nuclear warfare, but in spamming, it's considered unnecessary precision. -- Alun Jones

719. Re: QST contra-wound inductor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 02:32:00 UTC
From: BFHawkins <not@aol.com>
Message-ID: <3c4f721f$0$37102$ac966d11@news.raex.com>
Source record: 46960

Hi amdx and Group!

I too am confused about the "contra-winding" toroid. I sent my admission of confusion to DrBingo (KM5KG) and here is his response:

"Ben, instead of a single winding on a toroidal core, parallel two windings,
one half of the torus wound cw, and the other half of the torus ccw.

Grant"

I am still confused. Perhaps a picture would help. Does anyone have more information?

Thanks and best regards,
BFHawkins
KO0K

amdx <amdx@att.net> wrote in article <KMm28.109886$fe1.1867156@bgtnsc06-news.ops.worldnet.att.net>...
> In the Feb 2002 QST the article on matching short antennas
> refers to a contra-wound toroidal air core inductor as being
> a method to get very high Q. I've looked for more info, all
> I can find is the CTHA antenna.
> Is the CTHA the same winding method the author refers
> to (contra-wound)?
> Wouldn't a contra-wound inductor have zero inductance?
>
>
>
>
>

720. FA 320 amp power rectifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 03:05:38 UTC
From: James <jamesgangnc@earthlink.net>
Message-ID: <u4uug2bc2apnd5@corp.supernews.com>
Source record: 46961
Cross-posted to: rec.radio.swap,rec.radio.broadcasting,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1692193807

721. Re: Cheapest Homebrew Morse Key ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 04:04:51 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c4f8598.256779955@news.erols.com>
Source record: 46962

On Thu, 24 Jan 2002 00:12:33 GMT, mike@corn2.freeserve.co.uk (Mike W) wrote:

>Hows this for a Cheap and simple Morse Key ?
>
>www.corn2.freeserve.co.uk/key.gif
>
>Enjoy, Mike W, M3MSM qthr

Funny, but not quite accurate as the finished key is
still seen as "mounted" on a piece of rectangular
something. (block of wood?). Still, looks like fun!
Have you used it?

I would contend that 3 pins, 1 paper clip and a sm.
block of wood is equivalent to,....

1 clothes pin
2 thumb tacks

Thumb tacks are pushed into the clothes pin so they
contact when the clothes pin closes. You squeeze the
clothes pin to break circuit, relax to transmit.

Andrew

Reticulum

Remove "your.hat" when replying via e-mail

722. FS: Yaesu FT-101E PARTS, Reasonable!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 04:05:07 UTC
From: rlucch2098@aol.com
Message-ID: <20020123230507.23184.00000130@mb-fp.aol.com>
Source record: 46963

Hi Guys;
I have a complete Yaesu FT-101e Transceiver that I am parting out>
I have everything in Excellent condition except the MODE Switch.
Crystals, Boards, Tube sets, Knobs(not 1 or 2)the complete set, Cabinet.
While I AM NOT giving the parts away as some thought, they will be reasonable,
I have to take the time to remove them carefully, pack them carefully & type
all these e-mails :-).
Please ask, or make an Offer but not the entire unit!
Thanks es 73.....RICH-WA2RQY RLUCCH2098@aol.com
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

723. Re: Cheapest Homebrew Morse Key ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 04:08:30 UTC
From: k3bu@aol.com
Message-ID: <20020123230830.18489.00000286@mb-cu.aol.com>
Source record: 46964

> I would contend that 3 pins, 1 paper clip and a sm.
>block of wood is equivalent to,....
>
> 1 clothes pin
> 2 thumb tacks
>
> Thumb tacks are pushed into the clothes pin so they
>contact when the clothes pin closes. You squeeze the
>clothes pin to break circuit, relax to transmit.
>

Sooo, you read the gaps between the signal? Kinda reversed CW?
Clothes pin hard to press, I like paper clip mo better, you can even stick the tacks into the table and get key that never slides.
Yuri, K3BU/m

724. Re: H-Mode mixer inquiry

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 04:37:06 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <a2o3at$p0a$1@slb3.atl.mindspring.net>
Source record: 46965

http://www.geocities.com/CapeCanaveral/Lab/9595/fst3125.html

This website has some information on the mixer and a few test results.
It also has links to some schematics as well.

I have the original article around here somewhere and it goes into
discussions on how to make the crystal filters good enough to handle the
mixer.

It's interesting that most commercial crystal filters will overload
before this mixer does....

Although, the next problem would be the LO phase noise and spur
performance. Even ignoring the crystal filter overload and LO limits, the
mixer will fix a LOT of intermod in the front end of a radio.

==========

I am going to get the Pericom PI5C3125 which is their cross for the
FST3125 FET switching IC.

Seems to me I saw this chip on Digikey and I already have the toroids so
it ought to be easy enough to build. I love the dynamic range of this
mixer !!

Jim Pennell
N6BIU

725. Spread Spectrum Homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 05:30:51 UTC
From: spagnet@austin.rr.com
Message-ID: <f_M38.13713$ZK4.511166@typhoon.austin.rr.com>
Source record: 46966

Is anyone experimenting with spread spectrum? I just searched the web and found a lot of wind but very little in the way of nuts and bolts. I'm kind of tired of wading through all the ARRL and FCC news bulitins about proposed rule makings, rebuttals, and the like.

If you're experimenting with SS, I'd like to hear what you're doing. What PN sequence is most common (if any). Technical resources are welcome.I've got lots of questions so lets start simple and see if anyone is doing any construction.

KI5XW

726. Re: Cheapest Homebrew Morse Key ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 07:13:42 UTC
From: ok1sip@atlas.cz
Message-ID: <8f3e93b5.0201232313.198e2170@posting.google.com>
Source record: 46967

mike@corn2.freeserve.co.uk (Mike W) wrote in message
news:<3c4f50db.16339533@news.freeserve.net>...
> Hows this for a Cheap and simple Morse Key ?
>
> www.corn2.freeserve.co.uk/key.gif
>
> Enjoy, Mike W, M3MSM qthr

Hi Mike,
I tried similar simple "Morse keys" many years ago. They worked, but a strong pain in fingertips was their "byproduct". A really usable Morse key must always contain some sort of "soft stopper" not to damage your fingers.
Btw., one even simpler key for QRP was published in QST. You take a metal pen with a pocket clip, insulate the clip from the pen's body and connect one conductor to the clip, the other to the body. You key CW by touching the clip with your finger...

BR from Ivan

727. Re: QST contra-wound inductor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 07:53:34 UTC
From: k7itm@aol.com
Message-ID: <3200347.0201232353.de92b23@posting.google.com>
Source record: 46969

I think Jim Horn's posting explains it, but I'll try different words, since it's probably a bit confusing. Start at point A on the toroid, and wind turns, going around the perimeter of the core in a clockwise direction, and stop when you get half-way around at point B. Then start at same point A and wind turns going around in a counterclockwise direction. Now connect the two windings so their mutual inductance adds...that is, first wire from the finish (point B) to the second wire at the start (point A). Then the two remaining wires, first wire start and second wire finish, are the inductor leads.

Saying the same thing yet another way: start with a length of wire. Double it over--fold it in half, if you will. Pass the folded loop down through the center of the core. Now pull one of the free ends up through the middle to the right of the loop, and the other free end up to the left of the loop, and continue adding turns in this way. When you get enough turns total, cut the loop, and connect the loop-end of one winding to the free-end of the other winding. You can think of the two windings as being "right-hand threads" and "left-hand threads" around the core.

I may be mistaken, but I seriously doubt this will be a "silver bullet" that will make everything super high Q, especially at frequencies well below the self-resonance of the coil. And with a powdered-iron or ferrite core, a great deal of the loss is in the core and is not dependent on the winding style. I can believe an improvement, but not magic.

Cheers,
Tom

"BFHawkins" <not@aol.com> wrote in message
news:<3c4f721f$0$37102$ac966d11@news.raex.com>...
> Hi amdx and Group!
>
> I too am confused about the "contra-winding" toroid. I sent my admission of
> confusion to DrBingo (KM5KG) and here is his response:
>
> "Ben, instead of a single winding on a toroidal core, parallel two
> windings,
> one half of the torus wound cw, and the other half of the torus ccw.
>
> Grant"
>
> I am still confused. Perhaps a picture would help. Does anyone have more

> information?
>
> Thanks and best regards,
> BFHawkins
> KO0K
>
>
> amdx <amdx@att.net> wrote in article
> <KMm28.109886$fe1.1867156@bgtnsc06-news.ops.worldnet.att.net>...
> > In the Feb 2002 QST the article on matching short antennas
> > refers to a contra-wound toroidal air core inductor as being
> > a method to get very high Q. I've looked for more info, all
> > I can find is the CTHA antenna.
> > Is the CTHA the same winding method the author refers
> > to (contra-wound)?
> > Wouldn't a contra-wound inductor have zero inductance?
> >
> >
> >
> >
> >

728. looking for basic am/fm transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 08:01:56 UTC
From: Eric Heinz <EHeinz@optonline.net>
Message-ID: <UbP38.18755$6L5.3462686@news02.optonline.net>
Source record: 46970

hey all, i'm looking to basically build a small am/fm transmitter with a couple of miles of range. from what i gather this is based much more on the amplifier you use than the actual transmitter so i wanted to know what difference the transmitter makes. im also unsure how exactly you include the amplifier in the circuit and connect the antannea but i have basic circuit building knowledge and would prefer to build my own. if there are any low price kits however i would be willing to look, but i want to learn more about their functioning as well.

thanks a lot
-eric

729. Wanted Sockets for 4CX250's

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 09:49:56 UTC
From: Philip Lawrence <hitriode@iinet.net.au>
Message-ID: <3C4FD8C4.633588F6@iinet.net.au>
Source record: 46971

Wanted sockets and chimneys for 4Cx250's
Thanks
Phil

730. Re: 17 meter SSB project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 10:46:27 UTC
From: IJ.McCrum@ulst.ac.uk
Message-ID: <3c4fd9fe.51320683@news.ntlworld.com>
Source record: 46972

For 25W single band AMPs you could probably get CB transistors to do the job. Try

"A Broadband HF Amplifier using low cost Power Mosfets" Mike Kossor, WA2EBY, QST March 1999, pp40-43 and April 1999 pp43-46. Layout is critical but PCBs available, complete kits in fact...The design is a 28 or 24 volt design but gives 40 to 70 Watts. As a broadband it gives 15w at 12 volts. Very low cost!

FETs may be difficult to get going at your frequencies, EI9GQ has a 30w design for 80m with IRF521's but it seems the layout, and effect of gate capacitance gets hard as the frequency gos up.
http://homepage.tinet.ie/~ei9gq/80pa.html

"W1FB's design notebook" by Doug DeMaw has a 10W linear, pp 158-161

Harry , SM0VPO has a 10 watt linear with PCB artwork on his website. There are a few mirrors so do a google search.

"Solid State Design for the Radio Amateur" by Wes Hayward, W7ZOI and the late Doug DeMaw W1FB. There is a 15W linear on page 67 (Third printing, first edition)

Radcom January 1999 carried an article by Mike Grierson, G3TSO "A Solid State HF Linear Amp"... I only have part 1 in my collection!

There is a HANDs Kit "RTX/AMP broadband 18W amp reviewed in RADIO Communications (RADCOM) January 1995 pp48-49. Uses 2SC1969 low cost CB transistors. Sheldon is on the web
Hands Electronics ,Tegryn Llanfyrnach ,Pembs ,SA35 0BL
ENGLAND
Contact: Sheldon Hands ,Phone: 44(0)1239 698427
Fax: 44(0)870 1641918 Web Site: http://www.rf-kits.demon.co.uk
E-mail: hands@rf-kits.demon.co.uk

Of Course nearly all (bipolar)Linears are derived from the original Motorola datasheets.
AN762 (140W for 12-14v, buy a kit for abt 100 dollars)
EB63 (ditto)

I just did a web search on AN762 Motorola and got 17 hits
http://www.communication-concepts.com/hfamplifiers.htm is the most useful.

There are also Phillips datasheets on the web, reference not to hand...

My favourite homebrew amp project, some rainy day... would be to parallel up humble BD135's, unique in having a high Ft... the key is that as a TO225 case it is hard to heatsink it... solution is probably to clamp copper bars to a pack of 9 of them, say 3 by 3. A pair of packs would give you the power you need... A bit of a flight of fancy really, but the transisotrs are only 35p each! CB 18W trannies only cost a fiver (5 pounds sterling... that's probably a 8.10247 Euro note to you).

The layout problems at the higher frequencies may be offseted by using more modern transistor packages... There was a german website selling a very nice surface mount PA, forget the url... try www.funkamateur.de

Trouble is it is difficult to get accurate data for using cheap (non-RF) transistors at RF...

Paralleling up two linears appeals to me... switch one off to save power, increase reliability if far from home etc.

Anyway, enough. hope some of the above is useful. Keep in touch

Ian McCrum, MI5AFL, Lecturer in Digital Systems
University of Ulster. Search web for IAN MCCRUM to get email address.

On Wed, 23 Jan 2002 22:41:57 GMT, n2cqr@clix.pt (Bill Meara) wrote:

>..
>Most of the design is from an article in the British QRP magazine
>SPRAT (Nr.48) by Frank Lee, G3YCC (now a Silent Key). Solid State.
>Manhattan style construction. Junk box parts. My version generates
>the SSB at 5.173 Mhz. I had an old set of crystals from the filter
>and carrier oscillator in a Swan 240. The balanced modulator uses two
>diodes. After the filter there are two stages of amplification then
>the signal goes to an NE-602 mixer. The oscillator here is outboard
>to the NE-602. I upconvert to the operating frequency.
>
>That's how far I've gotten at this point. I'm looking around for RF
>Amp circuits that will take me up to around 25 watts. I want to stay
>with 12 Volts DC. Any suggestions? Are the kits based on Motorola
>circuit notesstill around? I also thought about adapting a 20 meter
>amp kit that Ramsey
>sells.
>...
>73 de Bill CU2JL (aka N2CQR)
>Sao Miguel Island
>The Azores, Portugal
>37.7 N 25.6 W
>http://planeta.clix.pt/n2cqr
>
>

731. Re: Schematic capture question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 11:00:14 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <ufpo2a.pja.ln@my.linux.box>
Source record: 46973

In article <3C4F71E4.1839C7BA@clifto.com>, Clifton T. Sharp Jr. wrote:
> Is there any schematic capture software available that moves wires along
> with parts, i.e. the part doesn't get disconnected from the circuit when
> you move the part?

Try Eagle CAD from Cadsoft. When asking about software,
is is always a good idea to mention what OS you are using.

Eagle CAD is available for Windows and Linux.

IIRC the url is http://www.cadsoftusa.com

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

732. Re: QST contra-wound inductor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 13:44:14 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c500f3b.6830849@news.freeserve.net>
Source record: 46974

I've put what I concider to be Contrawound in a pic for you at
www.corn2.freeserve.co.uk/contra.gif
But I have to admit toroids confuse the heck out of me, especially
transformer winding starts and ends.
hth Mike W, M3MSM

On Sat, 19 Jan 2002 22:52:26 GMT, "amdx" <amdx@att.net> wrote:

>In the Feb 2002 QST the article on matching short antennas
>refers to a contra-wound toroidal air core inductor as being
>a method to get very high Q. I've looked for more info, all
>I can find is the CTHA antenna.
> Is the CTHA the same winding method the author refers
>to (contra-wound)?
> Wouldn't a contra-wound inductor have zero inductance?
>
>
>
>

733. Re: Cheapest Homebrew Morse Key ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 13:44:21 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c4ff76e.737514@news.freeserve.net>
Source record: 46975

Ah, Yes Andrew, but my one Fails "safe" ;-)
I drew the cross section as a block of wood bacause that is what a
table to is, HI
and yes, I have used it
atb Mike W, M3MSM

On Thu, 24 Jan 2002 04:04:51 GMT, Cathexis@yourhaterols.com
(Reticulum) wrote:

>On Thu, 24 Jan 2002 00:12:33 GMT, mike@corn2.freeserve.co.uk (Mike W) wrote:
>
>>Hows this for a Cheap and simple Morse Key ?
>>
>>www.corn2.freeserve.co.uk/key.gif
>>
>>Enjoy, Mike W, M3MSM qthr
>
>
> Funny, but not quite accurate as the finished key is
>still seen as "mounted" on a piece of rectangular
>something. (block of wood?). Still, looks like fun!
>Have you used it?
>
> I would contend that 3 pins, 1 paper clip and a sm.
>block of wood is equivalent to,....
>
> 1 clothes pin
> 2 thumb tacks
>
> Thumb tacks are pushed into the clothes pin so they
>contact when the clothes pin closes. You squeeze the
>clothes pin to break circuit, relax to transmit.
>
> Andrew
>
> Reticulum
>
>Remove "your.hat" when replying via e-mail

734. Re: Spread Spectrum Homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 13:55:53 UTC
From: c.a.m@nospam.blueyonder.co.uk
Message-ID: <ed405uct8bfu902sc1ve33ba697g523u5o@4ax.com>
Source record: 46976

Hi.

>Is anyone experimenting with spread spectrum? I just searched the web and
>found a lot of wind but very little in the way of nuts and bolts. I'm kind
>of tired of wading through all the ARRL and FCC news bulitins about proposed
>rule makings, rebuttals, and the like.
>
>If you're experimenting with SS, I'd like to hear what you're doing. What
>PN sequence is most common (if any). Technical resources are welcome.I've
>got lots of questions so lets start simple and see if anyone is doing any
>construction.

Their was a complete SS 435MHz speech project in the UK magazine Wireless World a couple of years ago, I have it here (it spanned 2 magazines).

Complete circuit diagrams, construction details, test results etc.

Although I expect the chips to simplify it are around now.

If i can get it scanned in i'll send you the complete thing.

The transmitter is the easy bit, it's the receiver that's the most complicated bit.

Clive

735. Re: Spread Spectrum Homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 15:51:21 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <goa05ugmvu0k2a4j3l6fna9ekilklfbe3l@4ax.com>
Source record: 46977

On Thu, 24 Jan 2002 05:30:51 GMT, <spagnet@austin.rr.com> wrote:

>Is anyone experimenting with spread spectrum?

TAPR was. There isn't much activity with them these days. They're looking for a packaged FH setup that they can glom on to.

About five years ago I played with a DSSS setup centered on 52 MHz under an STA that TAPR had requested. We were going to run a BPSK DS rig with the information FM'ed on the sequence rate itself. The sequence was a simple 168 bit thing from the ARRL's spread spectrum handbook.

I had an R2 receiver and an identical LO with a broadband 90 degree phase shift network all set up to track the incoming DS signal with a sort of PLL FM style of tracking. We were having trouble tuning the loop to get it to lock up consistently. Looking back on it, there may have been problems with our phase shift network, but I really don't remember the details that well.

I got busy with other things in my life, including moving to a new house and having kids. Meanwhile the STA ran out before we got our rig out of the shop.

Some day I'll get back in to it, but not before my youngest is out of diapers at least...

73,

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

736. HELP PSK/ICOM IC-751

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 15:59:41 UTC
From: Al Cristaldi <megaman@cybernet1.com>
Message-ID: <a2pb1104ee@enews1.newsguy.com>
Source record: 46978

Seeking any assistance on wiring up PSK to my Icom IC-751. Understand it can be done with two wires utilizing the VOX instead of the three which requires the serial port for PTT. Is it possible to send the signal (out) from the sound card into the back of the rig or must I use the eight pin mic connector to the front of the rig?

Thanks.

Al
kk7gv@arrl.net

737. Re: Wanted Sockets for 4CX250's

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 17:07:18 UTC
From: Mike <m.j.willis@rl.ac.uk>
Message-ID: <a2pf8e$18qi@newton.cc.rl.ac.uk>
Source record: 46979

"Philip Lawrence" <hitriode@iinet.net.au> wrote in message
news:3C4FD8C4.633588F6@iinet.net.au...
> Wanted sockets and chimneys for 4Cx250's
> Thanks
> Phil
>
Be more specific please. What sockets?

738. Re: Cheapest Homebrew Morse Key ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 18:13:57 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0201241013.49f91b85@posting.google.com>
Source record: 46980

I can go lower (in cost) than any of you!

Just take the two ends of the wire, one in each hand, and touch them
together to key the transmitter!!

Done it. It works.

I suppose you could go even lower. Use only one wire, going to
ground, and touch it to the appropriate place in the circuit. Don't
even need a plug.

Even lower.... On a battery powered qrp rig, do away with the expense
of the extra wire (in previous idea) and make/break the ground
connection to the battery with your bare hands. I suppose you could
do this with a high power rig, but you should wear rubber gloves,
which would increase the cost again.

Jim
N8EE

739. Re: Cheapest Homebrew Morse Key ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 18:13:59 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0201241013.653850df@posting.google.com>
Source record: 46981

I can go lower (in cost) than any of you!

Just take the two ends of the wire, one in each hand, and touch them
together to key the transmitter!!

Done it. It works.

I suppose you could go even lower. Use only one wire, going to
ground, and touch it to the appropriate place in the circuit. Don't
even need a plug.

Even lower.... On a battery powered qrp rig, do away with the expense
of the extra wire (in previous idea) and make/break the ground
connection to the battery with your bare hands. I suppose you could
do this with a high power rig, but you should wear rubber gloves,
which would increase the cost again.

Jim
N8EE

740. Re: H-Mode mixer inquiry

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 20:18:51 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0201241218.42279c39@posting.google.com>
Source record: 46982

"Jim Pennell" <NoSpam@killspam.com> wrote in message
news:<a2o3at$p0a$1@slb3.atl.mindspring.net>...
> http://www.geocities.com/CapeCanaveral/Lab/9595/fst3125.html

[...]

> I have the original article around here somewhere and it goes into
> discussions on how to make the crystal filters good enough to handle the
> mixer.
>
> It's interesting that most commercial crystal filters will overload
> before this mixer does....
>
> Although, the next problem would be the LO phase noise and spur
> performance. Even ignoring the crystal filter overload and LO limits, the
> mixer will fix a LOT of intermod in the front end of a radio.

[...]

> Jim Pennell
> N6BIU

Hi Jim,

Any chance you could post the information on preventing crystal filter overload?

Thanks.

Mike Monett
mrmonett@yahoo.com

741. Information needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 20:18:56 UTC
From: g3pho@nospam.qsl.net
Message-ID: <3c536bed.7479331@news.virgin.net>
Source record: 46983

Posted by Peter, G3PHO, on behalf of Jack, G3JMB

Does anyone have information on:

Vectron Laboratories Crystal Module type 275 - 9288 frequency 96 MHz.
I have the pin out and nothing else from Vectron. who were most
uncooperative.

73 Jack G3JMB.

Please reply to me at JackG3JMB@aol.com

742. Re: QST contra-wound inductor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 20:44:54 UTC
From: James Horn <jimhorn@svn.net>
Message-ID: <3c507246@news.svn.net>
Source record: 46984

Sorry, Mike - Close but not quite. The top toroid is almost right. However, when winding it, the wire that goes across the diameter should also go down through the opening and then wind *up* in subsequent turns. The toroids you drew have their halves fields opposing each other, not in phase.

I first read of these inductors in Electronics (or Electronic Design) magazine back around 1980. Still a good trick.

Jim Horn, WB9SYN/6

743. FA - Collins 6 Khz AM filter for the 75S3B/C

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 20:49:57 UTC
From: Me <me@nym.alias.net>
Message-ID: <sls05u4um2sv6qk640n47dh7lktajjc1if@4ax.com>
Source record: 46985

The rarest and hardest to find of all Collins S-Line mechanical
filters, This is the F455FC60, 6.0 kHz
bandwidth AM mechanical filter. It's in perfect mechanical and
electrical condition and will greatly
enhance your 75S-3B or C receivers AM operation. 6 kHz is the ideal
bandwidth for good fidelity
and adjacent frequency splatter elimination. This filter is a drastic
improvement over the stock dual
I.F. can filters that are normally used for AM. Filter date code
indicates it was manufactured the
17th week of 1965. Buyer to pay with a money order or cashiers check
within seven days from the
end of the auction. $7.00 shipping total includes insurance

View here>>
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1326718762

744. FA - DX-Eng. Speech processor for the Collins 32S1/3

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 20:54:27 UTC
From: Me <me@nym.alias.net>
Message-ID: <i1t05u4r3ep1katfqg1i2ng8u58a9on6kt@4ax.com>
Source record: 46986

Here is an excellent DX-Engineering speech processor/linear compressor model LC-1-32S, serial
no. 379 for the Collins 32S-1/3 transmitter. This unit will give you added talk power to get over the
pileups, and is a true plug and play addition, with a switch on top for in or out operation. Included is
a copy of the manual on floppy disk and a tube already installed. Just pull out your first I.F. tube
(V3) and plug in the processor, and your in business. Buyer to pay with a money order or cashiers
check within seven days from the end of the auction. $7.00 shipping total includes insurance.

See Here>>
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1326722208

745. WEB

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 21:13:32 UTC
From: Zdravko <zdravko.francekovic@tel.hr>
Message-ID: <a2pt7f$4paa$1@as201.hinet.hr>
Source record: 46987

http://free-zg.hinet.hr/Frenki

746. Re: Schematic capture question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 22:10:35 UTC
From: Bill & Suzie Whatley <spud286@attbi.com>
Message-ID: <vD%38.7$RD5.315@rwcrnsc52.ops.asp.att.net>
Source record: 46989

If you are looking for a professional grade software, PCAD 2001 works very well and has good versatility.

WA5VRL
Willis

747. Pye 2nd IF unit details needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 22:13:41 UTC
From: Mike <mike@plexis.demon.co.uk>
Message-ID: <3C508715.53AADD06@plexis.demon.co.uk>
Source record: 46990

Hello guys and girls,

I have what I think are a pair of sub-assemblies from one of the classic old Pye PMR transceivers.

They are marked 'F.M. 2nd I.F. & DISC ASSY 276254'.

I originally bought these at a rally intending to poke the 10.7 MHz IF output from my R7000 scanner into them and widen the bandwidth before the discriminator in order to make a receiver for the NOAA weather satellites. This is because the FM bandwidth of the R7000 is too narrow for the NOAAs itself.

I really need some info on these because it's so long since I bought them I can't remember.

If anybody knows which radio they came out of and/or where I could get a circuit diagram it would be very useful.

Mike G4XBF

748. Re: 17 meter SSB project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 22:25:12 UTC
From: n2cqr@clix.pt
Message-ID: <3c5086e8.739021@news.clix.pt>
Source record: 46988

Ian: Thanks for the very FB message. I've seen a few of the articles you referenced but most of them are news to me. You have sent me to the stack of old QSTs. The Hands kit idea seems neat. I'm also thinking of using the 40 dollar Ramsey kit amp, 20 meter version. I think I could easily adapt for 17 meters.

I want this transmitter to be able to run at 1 watt and then at about 20 watts at the flip of a switch. I always wanted to be one of those guys who says, "Wait a minute, let me kick in the linyer."

73 de Bill CU2JL N2CQR
Sao Miguel island, the Azores, Portugal
37.7 N 15.7 W
http://planeta.clix.pt/n2cqr

On Thu, 24 Jan 2002 10:46:27 GMT, IJ.McCrum@ulst.ac.uk (Ian McCrum, MI5AFL) wrote:

>For 25W single band AMPs you could probably get CB transistors to do
>the job. Try
>
>"A Broadband HF Amplifier using low cost Power Mosfets" Mike Kossor,
>WA2EBY, QST March 1999, pp40-43 and April 1999 pp43-46. Layout is
>critical but PCBs available, complete kits in fact...The design is a
>28 or 24 volt design but gives 40 to 70 Watts. As a broadband it gives
>15w at 12 volts. Very low cost!
>
>FETs may be difficult to get going at your frequencies, EI9GQ has a
>30w design for 80m with IRF521's but it seems the layout, and effect
>of gate capacitance gets hard as the frequency gos up.
>http://homepage.tinet.ie/~ei9gq/80pa.html
>
>"W1FB's design notebook" by Doug DeMaw has a 10W linear, pp 158-161
>
>Harry , SM0VPO has a 10 watt linear with PCB artwork on his website.
>There are a few mirrors so do a google search.
>
>"Solid State Design for the Radio Amateur" by Wes Hayward, W7ZOI and
>the late Doug DeMaw W1FB. There is a 15W linear on page 67 (Third
>printing, first edition)
>
>Radcom January 1999 carried an article by Mike Grierson, G3TSO
>"A Solid State HF Linear Amp"... I only have part 1 in my collection!
>
>There is a HANDs Kit "RTX/AMP broadband 18W amp reviewed in RADIO

>Communications (RADCOM) January 1995 pp48-49. Uses 2SC1969 low cost CB
>transistors. Sheldon is on the web
>Hands Electronics ,Tegryn Llanfyrnach ,Pembs ,SA35 0BL
>ENGLAND
>Contact: Sheldon Hands ,Phone: 44(0)1239 698427
>Fax: 44(0)870 1641918 Web Site: http://www.rf-kits.demon.co.uk
>E-mail: hands@rf-kits.demon.co.uk
>
>Of Course nearly all (bipolar)Linears are derived from the original
>Motorola datasheets.
>AN762 (140W for 12-14v, buy a kit for abt 100 dollars)
>EB63 (ditto)
>
>I just did a web search on AN762 Motorola and got 17 hits
>http://www.communication-concepts.com/hfamplifiers.htm is the most
>useful.
>
>There are also Phillips datasheets on the web, reference not to
>hand...
>
>My favourite homebrew amp project, some rainy day... would be to
>parallel up humble BD135's, unique in having a high Ft... the key is
>that as a TO225 case it is hard to heatsink it... solution is probably
>to clamp copper bars to a pack of 9 of them, say 3 by 3. A pair of
>packs would give you the power you need... A bit of a flight of fancy
>really, but the transisotrs are only 35p each! CB 18W trannies only
>cost a fiver (5 pounds sterling... that's probably a 8.10247 Euro
>note to you).
>
>The layout problems at the higher frequencies may be offseted by using
>more modern transistor packages... There was a german website selling
>a very nice surface mount PA, forget the url... try www.funkamateur.de
>
>Trouble is it is difficult to get accurate data for using cheap (
>non-RF) transistors at RF...
>
>Paralleling up two linears appeals to me... switch one off to save
>power, increase reliability if far from home etc.
>
>Anyway, enough. hope some of the above is useful. Keep in touch
>
>Ian McCrum, MI5AFL, Lecturer in Digital Systems
>University of Ulster. Search web for IAN MCCRUM to get email
>address.
>
>
>
>
>
>

>
>On Wed, 23 Jan 2002 22:41:57 GMT, n2cqr@clix.pt (Bill Meara) wrote:
>
>>..
>>Most of the design is from an article in the British QRP magazine
>>SPRAT (Nr.48) by Frank Lee, G3YCC (now a Silent Key). Solid State.
>>Manhattan style construction. Junk box parts. My version generates
>>the SSB at 5.173 Mhz. I had an old set of crystals from the filter
>>and carrier oscillator in a Swan 240. The balanced modulator uses two
>>diodes. After the filter there are two stages of amplification then
>>the signal goes to an NE-602 mixer. The oscillator here is outboard
>>to the NE-602. I upconvert to the operating frequency.
>>
>>That's how far I've gotten at this point. I'm looking around for RF
>>Amp circuits that will take me up to around 25 watts. I want to stay
>>with 12 Volts DC. Any suggestions? Are the kits based on Motorola
>>circuit notesstill around? I also thought about adapting a 20 meter
>>amp kit that Ramsey
>>sells.
>>...
>>73 de Bill CU2JL (aka N2CQR)
>>Sao Miguel Island
>>The Azores, Portugal
>>37.7 N 25.6 W
>>http://planeta.clix.pt/n2cqr
>>
>>
>

749. Re: H-Mode mixer inquiry

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 22:56:56 UTC
From: Rich Griffiths <richg@one.net>
Message-ID: <3C509138.8F0DCD88@one.net>
Source record: 46991

Thanks, Jim. Lots of links to pursue on that page. I've bookmarked it
and will get back to it after reading the mail and newsgroups.

... Rich

Jim Pennell wrote:
>
> http://www.geocities.com/CapeCanaveral/Lab/9595/fst3125.html
>
> This website has some information on the mixer and a few test results.
> It also has links to some schematics as well.
>
> I have the original article around here somewhere and it goes into
> discussions on how to make the crystal filters good enough to handle the
> mixer.
>
> It's interesting that most commercial crystal filters will overload
> before this mixer does....
>
> Although, the next problem would be the LO phase noise and spur
> performance. Even ignoring the crystal filter overload and LO limits, the
> mixer will fix a LOT of intermod in the front end of a radio.
>
> ==========
>
> I am going to get the Pericom PI5C3125 which is their cross for the
> FST3125 FET switching IC.
>
> Seems to me I saw this chip on Digikey and I already have the toroids so
> it ought to be easy enough to build. I love the dynamic range of this
> mixer !!
>
> Jim Pennell
> N6BIU

750. Tona Tune??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-24 23:01:12 UTC
From: TacTic <george.shaw@btinternet.com>
Message-ID: <a2q3noibc1@paris.btinternet.com>
Source record: 46992

Does anyone have plans, notes, schema for what is know as a Tona Tune (I think BARTG had it in one of the Datacom mags?) or any tuning indicator for RTTY,PSK etc that could be constructed. If anyone has the article on the BARTG mag I would love a copy,scan.

george.shaw@ukf.net

751. Re: Cheapest Homebrew Morse Key ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 00:00:40 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c509f51.328912649@news.erols.com>
Source record: 46993

On Thu, 24 Jan 2002 13:44:21 GMT, mike@corn2.freeserve.co.uk (Mike W) wrote:

>Ah, Yes Andrew, but my one Fails "safe" ;-)
>I drew the cross section as a block of wood bacause that is what a
>table to is, HI
>and yes, I have used it
>atb Mike W, M3MSM

If you "fancied" it up you ciould probably make an iambic as well.
Say,two nails instead of pins. Then slap the clip back and forth between
the nails. Do agree with another that you'd need some kinda "handle"
for comfort's sake. How about an rubber pencil-top eraser?

Andrew
>
>On Thu, 24 Jan 2002 04:04:51 GMT, Cathexis@yourhaterols.com
>(Reticulum) wrote:
>
>>On Thu, 24 Jan 2002 00:12:33 GMT, mike@corn2.freeserve.co.uk (Mike W) wrote:
>>
>>>Hows this for a Cheap and simple Morse Key ?
>>>
>>>www.corn2.freeserve.co.uk/key.gif
>>>
>>>Enjoy, Mike W, M3MSM qthr
>>
>>
>> Funny, but not quite accurate as the finished key is
>>still seen as "mounted" on a piece of rectangular
>>something. (block of wood?). Still, looks like fun!
>>Have you used it?
>>
>> I would contend that 3 pins, 1 paper clip and a sm.
>>block of wood is equivalent to,....
>>
>> 1 clothes pin
>> 2 thumb tacks
>>
>> Thumb tacks are pushed into the clothes pin so they
>>contact when the clothes pin closes. You squeeze the
>>clothes pin to break circuit, relax to transmit.
>>
>> Andrew
>>
>> Reticulum

>>
>>Remove "your.hat" when replying via e-mail
>

Reticulum

Remove "your.hat" when replying via e-mail

752. Has anyone else heard/done this ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 00:05:30 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c50a042.329153345@news.erols.com>
Source record: 46994

Greetings,

Bit off-topic maybe. Has anyone here have any knowledge
or experience with the following?

I've heard you can take any of the Ameritron's running the
811's and do a direct swap for 572B's. The 600W goes to 800W
and the 800W goes to 1000W , no other mods needed, no muss,
no fuss. Sounds nice as I'm considering getting an Ameritron in
march, but money is an issue. Most Ameritrons are running about
1.00 to 1.75 per Watt, so I'd like to know if this is true.

TIA,

KG4JBM/ Andrew

Reticulum

Remove "your.hat" when replying via e-mail

753. Re: H-Mode mixer inquiry

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 00:26:35 UTC
From: "Harold E. Johnson" <W4ZCB@Home.com>
Message-ID: <%C148.2780$9A5.373826@news2.nash1.tn.home.com>
Source record: 46995

> Any chance you could post the information on preventing crystal filter overload?
>
> Thanks.
>
> Mike Monett

Three methods. Go to a lower frequency for your filter, (Hookes law gives you more freedom as you go lower) Pay a LOT more for your filters so the surface finish of the crystals is improved, and use quad hybrid inputs and outputs and a PAIR of matched filters to split the signal between them and gain 3 dB of signal handling. Actually, the mixer is good for any of these and will overload AFTER the filters do. LO phase noise from anything short of a crystal oscillator will kill you BEFORE you overload the filter however.....Either your phase noise or his.

W4ZCB

754. Re: Looking for a resistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 00:36:42 UTC
From: funkbastler <funkbastler@delete-this.yahoo.com>
Message-ID: <i2a15u4d3nrgk0nodunfjfri117n2nf5er@4ax.com>
Source record: 46996

If you haven't found one yet, try an Ohmite B20J8K0

See http://www.ohmite.com/catalog/pdf/200_series.pdf

Any Ohmite distributor should be able to get it for you.

On Wed, 16 Jan 2002 22:40:51 GMT, "Clyde R. Shappee"
<cshappee@ieee.org> wrote:

>Hello,
>
>I am looking for a power resistor, 20 W, 8000 ohms. It is tubular, with
>radial leads. 0.6 inches diameter, about 2.4 inches long. I believe it
>was manufactured by IRC. It is the cement kind.
>
>I have looked everywhere, Surplus sales, Dans, Ocean State, Debco....
>
>Any clues?
>
>Clyde
>
>KA1CRV
>
>PLS Pardon me if I posted here before. Didn't find it in my sent
>box....

755. Re: Cheapest Homebrew Morse Key ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 00:56:30 UTC
From: funkbastler <funkbastler@delete-this.yahoo.com>
Message-ID: <i9a15usk6nap9khb73kql8gso89i6vu38l@4ax.com>
Source record: 46897

On 23 Jan 2002 23:13:42 -0800, ok1sip@atlas.cz (Ivan) wrote:

>mike@corn2.freeserve.co.uk (Mike W) wrote in message
news:<3c4f50db.16339533@news.freeserve.net>...
>> Hows this for a Cheap and simple Morse Key ?
>>
>> www.corn2.freeserve.co.uk/key.gif
>>
>> Enjoy, Mike W, M3MSM qthr
>
>Hi Mike,
>I tried similar simple "Morse keys" many years ago. They worked, but a
>strong pain in fingertips was their "byproduct". A really usable Morse
>key must always contain some sort of "soft stopper" not to damage your
>fingers.
>Btw., one even simpler key for QRP was published in QST. You take a
>metal pen with a pocket clip, insulate the clip from the pen's body
>and connect one conductor to the clip, the other to the body. You key
>CW by touching the clip with your finger...
>
>BR from Ivan

Think I'll stick with my J-47.

756. Re: Cheapest Homebrew Morse Key ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 01:00:58 UTC
From: Marty <nfn04028@naples.net>
Message-ID: <e7248.11489$ag5.983048@newsread2.prod.itd.earthlink.net>
Source record: 46898

Lower yet: Use AM and whistle. Off key of course.

"JLB" <jim.bolinger@lintek.aeroflex.com> wrote in message
news:8d5ec8a2.0201241013.49f91b85@posting.google.com...
> I can go lower (in cost) than any of you!
>
> Just take the two ends of the wire, one in each hand, and touch them
> together to key the transmitter!!
>
> Done it. It works.
>
> I suppose you could go even lower. Use only one wire, going to
> ground, and touch it to the appropriate place in the circuit. Don't
> even need a plug.
>
> Even lower.... On a battery powered qrp rig, do away with the expense
> of the extra wire (in previous idea) and make/break the ground
> connection to the battery with your bare hands. I suppose you could
> do this with a high power rig, but you should wear rubber gloves,
> which would increase the cost again.
>
> Jim
> N8EE
>

757. Re: Has anyone else heard/done this ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 01:20:42 UTC
From: jcplpsm@aol.communicate
Message-ID: <20020124202042.21881.00000338@mb-fj.aol.com>
Source record: 46899

Why would you even bother. Its only a 1dB increase. You can change your coax to 9913 and probably get better results for less money, and improve your receiver input to boot.

> I've heard you can take any of the Ameritron's running the
>811's and do a direct swap for 572B's. The 600W goes to 800W
>and the 800W goes to 1000W , no other mods needed, no muss,
>no fuss.

758. Re: H-Mode mixer inquiry

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 01:32:15 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <a2qcj2jft1@slb1.atl.mindspring.net>
Source record: 46900

"Harold E. Johnson" <W4ZCB@Home.com> Wrote:

>> Any chance you could post the information on preventing
>> crystal filter overload?
>>
>> Thanks.
>>
>> Mike Monett
>
> Three methods. Go to a lower frequency for your filter,
> (Hookes law gives you more freedom as you go lower) Pay
> a LOT more for your filters so the surface finish of the
> crystals is improved, and use quad hybrid inputs and
> outputs and a PAIR of matched filters to split the signal
> between them and gain 3 dB of signal handling. Actually,
> the mixer is good for any of these and will overload AFTER
> the filters do. LO phase noise from anything short
> of a crystal oscillator will kill you BEFORE you overload
> the filter however.....Either your phase noise or his.
>
>W4ZCB
>

Yes, the method used was two identical ladder filters and toroid based hybrid splitters and combiner. This maintains the 50 ohm match at all frequencies for the mixer IF port while also improving the dynamic range of the crystal filter system.

As I recall, there was a reason for the ladder topology being better, something about the ferrite in most tuned filter systems saturating. I am going from memory on that part, but I think that was correct.

He also recommended hybrid splitters and dual RF filters before the mixer to keep 50 ohms at all frequencies while getting good front end selectivity. One of the other problems with most designs is the match for the RF port on the mixer going bad at the LO frequencies.

This RF mismatch usually degrades the mixer performance even though it is on the RF port while a lot of articles mainly discuss the IF port as being the critical match. This same mismatch can, and does, affect double balanced diode mixer perfromance.

==========

While mentioning the LO phase noise problems, that was beyond the scope of the article so no solution was recommended. Improving LO performance

is a massive and complex issue and I can see why he didn't go into it.

Still, the RF and mixer sections he did discuss do indeed offer superior performance over just about all commercial rigs out there. In my case, I live in the silicon valley part of california and there is a LOT of signals sneaking in my antenna line..... Which is why I am taking a hard look at this design.

Jim Pennell
N6BIU

759. Re: Spread Spectrum Homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 01:37:19 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <a2qcsf$2h6$1@slb7.atl.mindspring.net>
Source record: 46901

Seems to me the FCC limited spread spectrum ham experiments to 440 and above. I think they also specifed the allowable PN sequence codes but I am not sure as to that part.

One thing is, they want to be able to listen in and so I can pretty much guarantee that they will limit the choices for what hams can use for spread spectrum stuff.

Jim Pennell
N6BIU

760. Re: QST contra-wound inductor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 02:35:32 UTC
From: amdx <amdx@att.net>
Message-ID: <Uv348.1077$S67.60290@bgtnsc05-news.ops.worldnet.att.net>
Source record: 46902

> I may be mistaken, but I seriously doubt this will be a "silver
> bullet" that will make everything super high Q, especially at
> frequencies well below the self-resonance of the coil. And with a
> powdered-iron or ferrite core, a great deal of the loss is in the
> core and is not dependent on the winding style. I can believe an
> improvement, but not magic.
>

The article suggested an air core toroid. Eliminating the core losses.

Mike

761. WTB 0A2

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 03:32:49 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3C50D1E1.753BC684@visi.com>
Source record: 46903

Hi,
If anyone has an 0A2 regulator tube they want to sell drop me a post.
Thanks

Bob
wb0poq@visi.com

762. RCA UHF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 03:58:44 UTC
From: crtech@hot.XXX.rr.com
Message-ID: <3c50d7e8.301149756@news-server.hot.rr.com>
Source record: 46904

Hello, I have an old mobile UHF radio that I am trying to get some information on. I believe it to be an RCA series 700 radio. Here is the information I have.

Model CMLL4MMB
Channel Element 3457514
Remote head and mic. RCA is the only thing on it.

I can get some crystals for it (that is how I fould out that it might be a series 700) but I would like to have some more information on it. Would also prefer a manual too.

I have searched the web for quite some time and have been able to find references to it but no pictures and no real information.

Thank you for any help you might be able to privide.

763. Re: DR. KING DAY: AFFIRMATIVE ACTION NEEDED IN HAM RADIO!!!!!!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 04:02:55 UTC
From: gus4fun@nospam.net
Message-ID: <3C50D907.D8F61FFC@nospam.net>
Source record: 46905

I have to take a code test and not someone else? That don't wash with me.

764. Re: Will it...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 04:03:39 UTC
From: "Joe S." <joe@schlatter.org>
Message-ID: <a2qlfi01odh@enews4.newsguy.com>
Source record: 46907
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

Well, I was complaining to my wife about the high cost of Viagra -- $10 per pill -- she said, "It's not a problem, we can afford $50.00 a year."

--
- - -

Regards,
Joe S.

"Reticulum" <Cathexis@yourhaterols.com> wrote in message news:3c4cb52b.72323508@news.erols.com...
>
> The group might be interested in this news item:
>
> Pfizer Corp. (NYSE PFE) is making the announcement today that VIAGRA
> will soon be available in liquid form and will be marketed by Pepsi Cola
> (Pepsi Bottling Group NYSE PBG) as a power beverage suitable for use
> as-is, or as a mixer, under the name "Mount And Do."
> Pepsi's proposed ad campaign suggests: "It will now be possible for a
> man to literally pour himself a stiff one."
> >
>
>
> Reticulum
>
> Remove "your.hat" when replying via e-mail

765. Re: RCA UHF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 04:11:53 UTC
From: Gary Glaenzer <nobulltrans@irtc.net>
Message-ID: <dW448.107$%S2.13303869@news2.randori.com>
Source record: 46906

RCA sold out their land mobile operation in 83.

They were big with state agencies out east, you might start by calling Departments of Transportation in PA, NY, NJ; and ask for the chief communications engineer.....my experience is that state agencies keep old manuals/paperwork forever.....

good luck.....that stuff was built like a battleship, it should work if you can find the info.

"Gus" <crtech@hot.XXX.rr.com> wrote in message news:3c50d7e8.301149756@news-server.hot.rr.com...
> Hello, I have an old mobile UHF radio that I am trying to get some
> information on. I believe it to be an RCA series 700 radio. Here is
> the information I have.
>
> Model CMLL4MMB
> Channel Element 3457514
> Remote head and mic. RCA is the only thing on it.
>
> I can get some crystals for it (that is how I fould out that it might
> be a series 700) but I would like to have some more information on it.
> Would also prefer a manual too.
>
> I have searched the web for quite some time and have been able to find
> references to it but no pictures and no real information.
>
> Thank you for any help you might be able to privide.
>
>

766. Re: DR. KING DAY: AFFIRMATIVE ACTION NEEDED IN HAM RADIO!!!!!!!!!!!!!!!!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 04:39:52 UTC
From: " .Your Friend Bill" <none@coqui.net>
Message-ID: <3C50E198.E36506AF@coqui.net>
Source record: 46908

gus4fun@nospam.net wrote:
>
> I have to take a code test and not someone else? That don't wash with
> me.

No. The point is that there should be a code test for the honkies and another one done to a rap beat instead of the cracker-boy-Morse one being forced down the throats of individuals stolen from the dark continent who are still rubbing their chain marks. Kinda like substituting Ebonics for English at the college level. Its a cultural thing, you know what I'm saying?

Yo-

767. WTB: 8877 Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 05:16:39 UTC
From: we6a@wt.net
Message-ID: <4522def3.0201242116.665af790@posting.google.com>
Source record: 46909

Looking to buy 1 or 2 good used or new tubes. If you have any please let me know.

Robert

768. Re: Has anyone else heard/done this ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 05:51:20 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c50eb94.348438425@news.erols.com>
Source record: 46910

On 25 Jan 2002 01:20:42 GMT, jcplpsm@aol.communicate (SAM) wrote:

>Why would you even bother. Its only a 1dB increase. You can change your coax
>to 9913 and probably get better results for less money, and improve your
>receiver input to boot.

Sam,

With respect,....

You must not chase much DX or hang out very often on 75/80M
or 160M. Do you really think that better coax is gonna break a massive
pile-up of rich old hams who can all afford Henry 3 or5 KW's ???

If your point is to not forget the total system, I agree completely. I can
think of at least a dozen ways I could improve my shack. But if you're gonna
sit there and tell me that you worked Kingman's Reef on 5 bands on your dad's
old 50W Lafayette rig (or whatever) -- Give me a break. And if you're QRP,
see how many you get if you stop calling "QRP" before/after your callsign.
Likewise for Mobiles. They both succeed just as much by appeal to the DX's
ego as by the calling station's skill.

If you have knowledge you can share about increasing signal strength
then I'd love to hear it. But this thread asks a specific question on amp.
mods. You're talking to the wrong person about any "debate" on the issue
of using linears. I'll take any advantage I can get. And in the world below
4.0MHz -- The more fire in the wire the better.

73 de KG4JBM

Reticulum

Remove "your.hat" when replying via e-mail

769. Re: QST contra-wound inductor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 07:41:20 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C510C20.890D5B@eznec.com>
Source record: 46911

I've done this for years, after first coming across the idea in Ham Radio magazine about 20 years ago. I've measured Q increases of around 10 - 20% on inductors wound on type 2 or 6 powdered iron.

Roy Lewallen, W7EL

Tom Bruhns wrote:
>
> I think Jim Horn's posting explains it, but I'll try different words,
> since it's probably a bit confusing. Start at point A on the toroid,
> and wind turns, going around the perimeter of the core in a clockwise
> direction, and stop when you get half-way around at point B. Then
> start at same point A and wind turns going around in a
> counterclockwise direction. Now connect the two windings so their
> mutual inductance adds...that is, first wire from the finish (point B)
> to the second wire at the start (point A). Then the two remaining
> wires, first wire start and second wire finish, are the inductor
> leads.
>
> Saying the same thing yet another way: start with a length of wire.
> Double it over--fold it in half, if you will. Pass the folded loop
> down through the center of the core. Now pull one of the free ends up
> through the middle to the right of the loop, and the other free end
> up to the left of the loop, and continue adding turns in this way.
> When you get enough turns total, cut the loop, and connect the
> loop-end of one winding to the free-end of the other winding. You can
> think of the two windings as being "right-hand threads" and "left-hand
> threads" around the core.
>
> I may be mistaken, but I seriously doubt this will be a "silver
> bullet" that will make everything super high Q, especially at
> frequencies well below the self-resonance of the coil. And with a
> powdered-iron or ferrite core, a great deal of the loss is in the
> core and is not dependent on the winding style. I can believe an
> improvement, but not magic.
>
> Cheers,
> Tom

770. Re: Cheapest Homebrew Morse Key ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 10:20:15 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c513102.610947@news.freeserve.net>
Source record: 46912

On Fri, 25 Jan 2002 01:00:58 GMT, "Marty" <nfn04028@naples.net> wrote:

>Lower yet: Use AM and whistle. Off key of course.
>
Better use SSB, AM will produce two sidebands and no-one will know
which one you are listening on ;-)
Apart from that, is your whistle stable enough?.
atb Mike W

771. Re: QST contra-wound inductor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 10:43:06 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.com>
Message-ID: <pgOMB4I6aTU8EAvK@ifwtech.com>
Source record: 46913

Roy Lewallen wrote:
>I've done this for years, after first coming across the idea in Ham
>Radio magazine about 20 years ago. I've measured Q increases of around
>10 - 20% on inductors wound on type 2 or 6 powdered iron.

The idea was in HR for September 1978, recommended by W1JR as a way of winding a coaxial balun on a toroid. However, it may not have been original even so long ago.

That particular balun design used coax with a third wire (if I remember rightly) and the winding method was proposed as a way of reducing end-to-end capacitive coupling. Ever since seeing the idea, I've used it routinely for winding coax on toroidal cores, for RFI suppression or for current baluns, but never noticed that the same principle applies equally well to single wire windings.

Is the increase in measured Q simply due to the reduction in end-to-end self capacitance?

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.com/g3sek

772. Brand new stuff at www.ab7sl.com

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 17:05:42 UTC
From: Charles Johnston <ctj92@cableone.net>
Message-ID: <3c519073@news.bnb-lp.com>
Source record: 46914
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

Some new stuff has been added at www.ab7sl.com in the past few weeks....

1. Site search - the entire site is now indexed and searchable from the
homepage

2. Arizona Repeaters Page - covering all repeaters statewide
on ALL bands. Sorted by county,band and frequency.
This added some 20 pages to the site.....

3. Weather Page - shows temps for selected US cities , full weather
conditions
for Prescott,AZ and USA - World weather maps and forecasts...

4. Added a Grand Kids Photos page....they are so cute and adorable!

--

73 / DX

Charles T Johnston
Prescott, Arizona - U.S.A.
charles@ab7sl.com

AB7SL - Ham Radio Pages
Official W9INN Antennas Page
www.ab7sl.com

773. Re: Cheapest Homebrew Morse Key ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 19:02:42 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0201251102.5f572d2d@posting.google.com>
Source record: 46915

But, you would need a microphone, which would bring the cost back up.

"Marty" <nfn04028@naples.net> wrote in message
news:<e7248.11489$ag5.983048@newsread2.prod.itd.earthlink.net>...
> Lower yet: Use AM and whistle. Off key of course.
>
>
> "JLB" <jim.bolinger@lintek.aeroflex.com> wrote in message
> news:8d5ec8a2.0201241013.49f91b85@posting.google.com...
> > I can go lower (in cost) than any of you!
> >
> > Just take the two ends of the wire, one in each hand, and touch them
> > together to key the transmitter!!
> >
> > Done it. It works.
> >
> > I suppose you could go even lower. Use only one wire, going to
> > ground, and touch it to the appropriate place in the circuit. Don't
> > even need a plug.
> >
> > Even lower.... On a battery powered qrp rig, do away with the expense
> > of the extra wire (in previous idea) and make/break the ground
> > connection to the battery with your bare hands. I suppose you could
> > do this with a high power rig, but you should wear rubber gloves,
> > which would increase the cost again.
> >
> > Jim
> > N8EE
> >

774. Re: WTB 0A2

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 19:15:47 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C51AFA8.C35@pop.removethistomailme.net>
Source record: 46916

Bob Liesenfeld wrote:
>
> Hi,
> If anyone has an 0A2 regulator tube they want to sell drop me a post.
> Thanks
>
> Bob
> wb0poq@visi.com

Try http://www.tubesandmore.com?

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

775. Re: Hearing aid "buzzing"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 21:31:59 UTC
From: donrm@soco.agilent.com
Message-ID: <1011994319.341081@cswreg.cos.agilent.com>
Source record: 46917

G345CDE <g345cde@aol.com> wrote:
>
> My problem is that I have an analog hearing aid (only one good ear with aid)
> and have to use a digital cell phone on that ear. You know the
> result......high level buzz. I know there is a commercial product designed to
> solve the problem, but what about something home brewed ? Thanks, GHF W3ASE

I suspect you're using a TDMA cellphone and you're hearing the
transmitter switching rate, resulting in the buzz. Other than
shielding the hearing aid with a metal screen over your ear or
finding some way to prevent RF from entering the aid's circuits,
I'd go with an external earphone/mike to keep the cellphone's
antenna away from your head.

73 Don K6LTS
donrm@soco.agilent.com

776. Re: Has anyone else heard/done this ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 22:53:31 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <u53p08pi1qbba5@corp.supernews.com>
Source record: 46918

The 572 is capable of putting out more power but to do that you need to supply it more power!
Remember that this is an amplifier and if you can load it to put out more power it'll draw more from the power supply.
A little less than half the power will be used up in the plate resistance of the tube and dissipated as heat and most of the rest can be loaded into the antenna. Some of the power will be dissipated as heat in the internal resistance of the power supply.
So if you install 572 and try to load it more, the internal resistance (read capability of the dc power supply) will be the limiting factor. Power output is effiency times volts times amps. I'll bet the that Ameritron didn't leave any reserve in that power supply so you if your that set on it build an outboard supply and put in the 572 and you'll get more power. A 572 can take 2400vdc on the plate and 600 watts whereas the 811 is rated for 1700vdc at 270 watts. The thought sounds good but it's too good to be true so I agree with the previous response to buy better coax and that'll help on rx as well. Two other things you should consider is a good used Heathkit SB 200 or better yet Heathkit SB 220 with 3-500Z . Both are very good amps and very reasonably priced. Drake L7 and L4 are also very good but cost a little more. If you have to have the power find a good Heathkit and you'll be happy.

"Reticulum" <Cathexis@yourhaterols.com> wrote in message news:3c50a042.329153345@news.erols.com...
> Greetings,
>
> Bit off-topic maybe. Has anyone here have any knowledge
> or experience with the following?
>
> I've heard you can take any of the Ameritron's running the
> 811's and do a direct swap for 572B's. The 600W goes to 800W
> and the 800W goes to 1000W , no other mods needed, no muss,
> no fuss. Sounds nice as I'm considering getting an Ameritron in
> march, but money is an issue. Most Ameritrons are running about
> 1.00 to 1.75 per Watt, so I'd like to know if this is true.
>
> TIA,
>
> KG4JBM/ Andrew
>
> Reticulum
>
> Remove "your.hat" when replying via e-mail

777. WTB/WTT: Timer Relay for SR-2000

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-25 23:13:16 UTC
From: Joe Hargis <joehargis@worldnet.att.net>
Message-ID: <gEl48.2418$S67.138070@bgtnsc05-news.ops.worldnet.att.net>
Source record: 46919

Looking for the timer relay (12v, 90 sec) in the SR-2000 ps. Have many tubes, parts, transformers to trade. Will consider 6 v, 60-90 sec also(all are 9 pin. Joehargis@worldnet.att.net

778. 30.000 links

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 00:06:12 UTC
From: Willi Passmann <DJ6JZ@compuserve.de>
Message-ID: <a2st5a$p5h$02$3@news.t-online.com>
Source record: 46920

Hi folks,

I would like to announce that the radio-portal database now contains more than 30,000 hobby related URLs. During the last two weeks I concentrated on collecting URLs for manuals, modifications and reviews, as this kind of information is of special interest for many of us.

radio-portal is a search engine especially for radio amateurs and short wave listeners; it was awarded by Radio Netherlands with the Milleneum Innovation Award in the year 2000.

If you should not find information on a specific model, try a search using the manufacturer's name, and limit the search to the category of interest (like "Modifications", "Manuals and Schematics", "Reviews"...)

vy 73,
Willi Passmann, DJ6JZ
www.radio-portal.org

779. Re: Has anyone else heard/done this ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 00:53:49 UTC
From: spagnet@austin.rr.com
Message-ID: <x6n48.42518$XZ1.2252677@typhoon.austin.rr.com>
Source record: 46921

His point was obvious to me, why spend a lot of time and a fair amount of money to modify a rig when there are lots of other ways to improve your signal by 1dB which are far more simple. You might argue that 1dB isn't worth it and I would understand, but your flaming a knowledgable person over a reasonable remark.

KI5XW

"Reticulum" <Cathexis@yourhaterols.com> wrote in message news:3c50eb94.348438425@news.erols.com...
> On 25 Jan 2002 01:20:42 GMT, jcplpsm@aol.communicate (SAM) wrote:
>
> >Why would you even bother. Its only a 1dB increase. You can change your coax
> >to 9913 and probably get better results for less money, and improve your
> >receiver input to boot.
>
> Sam,
>
> With respect,....
>
> You must not chase much DX or hang out very often on 75/80M
> or 160M. Do you really think that better coax is gonna break a massive
> pile-up of rich old hams who can all afford Henry 3 or5 KW's ???
>
> If your point is to not forget the total system, I agree completely. I can
> think of at least a dozen ways I could improve my shack. But if you're gonna
> sit there and tell me that you worked Kingman's Reef on 5 bands on your dad's
> old 50W Lafayette rig (or whatever) -- Give me a break. And if you're QRP,
> see how many you get if you stop calling "QRP" before/after your callsign.
> Likewise for Mobiles. They both succeed just as much by appeal to the DX's
> ego as by the calling station's skill.
>
> If you have knowledge you can share about increasing signal strength
> then I'd love to hear it. But this thread asks a specific question on amp.
> mods. You're talking to the wrong person about any "debate" on the issue
> of using linears. I'll take any advantage I can get. And in the world below
> 4.0MHz -- The more fire in the wire the better.
>
> 73 de KG4JBM

>
> Reticulum
>
> Remove "your.hat" when replying via e-mail

780. Re: Pye 2nd IF unit details needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 02:10:24 UTC
From: la8ak.xnd@online.no
Message-ID: <3c51f4fa.363522762@news.online.no>
Source record: 46922

On Thu, 24 Jan 2002 22:13:41 +0000, Mike <mike@plexis.demon.co.uk>
wrote:

>Hello guys and girls,
>
>I have what I think are a pair of sub-assemblies from one of the classic
>old Pye PMR transceivers.
>
>They are marked 'F.M. 2nd I.F. & DISC ASSY 276254'.
>
it is 455kHz IF, but not for F30FM according to the handbook, several
others like W15FM Westminster are almost the same in many respects as
the F30FM

found it later, 276254/10 is for 25kHz channels and 276254/11 is for
50khz channels with F60FM, might also be from FM10d Cambridge, it is
quite old, I wouldn't have bothered with it. The first Westminster was
made in 1967, and the revised version is from 68, but the Cambridge
series is earlier, used mainly Ge-type transistors, possibly 1964.
Issue 3 Service manual for F60FM is dated August 1966

We used to go to B. Bamber, also G8AGN at Rugby - where I bought AM25B
and AM25T in '74 (same sort of equpment as the Cambridge) and tried
conversion from AM to FM with boards from B. Bamber

73
LA8AK
--
remove ,xnd to reply

781. AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 02:53:17 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C5219B4.5643@pop.removethistomailme.net>
Source record: 46923
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Miles wrote:
>
> <snip>
> The phase detector will be an Analog Devices ADF4112 (ordered via
> Analog's direct-sales web site but not received yet). This is
> essentially a copy of the NatSemi PLLatinum chip with a programmable
> prescaler and more charge-pump gain....
> <snip>

So, after much late-night tinkering, here are some follow-up results for this synthesizer design (blue), compared to the synthesizer in my Icom R7000 (magenta):

http://209.95.122.40/jm/WIDE.GIF (R7000 'wins' by 7 dB at 10 kHz due to its
cleaner VCOs)
http://209.95.122.40/jm/MEDIUM.GIF (R7000's narrow loop is very noisy close-in)
http://209.95.122.40/jm/NARROW.GIF (R7000 is garbage, while we look pretty
good)

Worst-case lock time is similar for both, although their step functions look
very different:

http://209.95.122.40/jm/TIME.GIF (blue/magenta=R7000 stepping between 770
and 1030 MHz; red/green=DDS PLL stepping between 1000 and 2000 MHz)

In general the ADF4112 doesn't seem any quieter than the LMX2326 I tried earlier. The ADF4112 supposedly allows up to 5 mA of charge-pump gain versus the LMX2326's 1 mA, but I kept running into stability problems at gain settings over 2.5 mA. These plots were made with a loop bandwidth of 2.1 kHz and a charge-pump gain of 1.88 mA.

Still, this is more-than-passable performance for such a simple design! I've never seen a synthesizer with a gigahertz of range and sub-1 Hz resolution that fits into a 4" x 2" Hammond 1590G box before... much less managed to build one. It's less than a third the size of the R7000's 770-1290 MHz PLL assembly, and has 100 times the frequency resolution and up to 30 dB less close-in phase noise.

-- jm

```
-----------------------------------------------------
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
-----------------------------------------------------
```

782. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 09:49:07 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C527C65.27E4@pop.removethistomailme.net>
Source record: 46924
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

```
Page updated at http://www.qsl.net/ke5fx/synth.html with photo and
screenshots; more to come.

-- jm

------------------------------------------------------
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
------------------------------------------------------
```

783. Icom HM-98 modification?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 12:14:23 UTC
From: Jesper <jmandre@bigfoot.com>
Message-ID: <3C529D07.FBF04799@bigfoot.com>
Source record: 46926

I have a IC-2800 in my car with a HM-98 microphone.
I want to use it for local repeater operation, so the 1750Hz
bleep
is used a lot. Unfortunately the built-in bleep is accessed
by pushing
two buttons under the cover of the mic that I usually prefer
to keep on.

The best solution I can think of is to install a separate
1750Hz oscillator
with a new button somewhere near the PTT. Has anyone done
this already,
or are there better ways of doing this?

While at this subject, is there a place on the net where I
can find info on
the serial data format that the HM-98 uses to communicate
with the rig?

73 de SM0 OMW
Jesper

784. Re Torroid Tutorial

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 12:52:15 UTC
From: "news.bellatlantic.net" <vze3kq35@verizon.net>
Message-ID: <3Ex48.1149$pb.937@nwrddc01.gnilink.net>
Source record: 46925

Amidon's website has most of the information you need on spec'ing a torroid.
Then most of the recent ARRL Handbooks have "how to" in the power supply
section -- I have built a couple of switching power supplies from the above
sources (and they work.)

785. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 14:05:24 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0201260605.63f2ed57@posting.google.com>
Source record: 46927
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3C527C65.27E4@pop.removethistomailme.net>...
> Page updated at http://www.qsl.net/ke5fx/synth.html with photo and
> screenshots; more to come.
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

Fantasic, John. You got my vote for MVPOTY. This is just what I have
been looking for.

"text and schematics to follow"

Please hurry - is there anything we can do to help?

(mvpoty - Most Valuable Post Of The Year)

Regards,

Mike Monett
mrmonett@yahoo.com

786. WTB: Drake 1544/1548 for TR-t

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 15:32:24 UTC
From: k9sqg@aol.com
Message-ID: <20020126103224.26823.00000597@mb-fa.aol.com>
Source record: 46928

Looking for one more set of 1544 and 1548, the cable and adaptor that allows one to transcieve the TR-7, R-7, and RV-75 vfo. Need one more set to just about finish my collection.

73s,

Evan

787. Re: H-Mode mixer inquiry

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 16:43:30 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <a2umjk$ef4$1@slb4.atl.mindspring.net>
Source record: 46929

I found the article about this mixer topology....

It was in 'Commumications Quarterly' Fall 1994 edition

Page 81

This was a reprint from an earlier article which, I think, was in a British magazine.

Oh yes, there is also some information on the mixer in the 2001 ARRL handbook, section 15.28 seems to be the main page to look at.

The handbook does not go into as much information about the hybrid splitters and dual crystal filters and so on, but some stuff on the the mixer itself is there.

Jim Pennell

N6BIU

788. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 17:25:50 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C52E76F.4BED@pop.removethistomailme.net>
Source record: 46930
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett wrote:
>
> John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3C527C65.27E4@pop.removethistomailme.net>...
> > Page updated at http://www.qsl.net/ke5fx/synth.html with photo and
> > screenshots; more to come.
> >
> > -- jm
> >
> > --
> > http://www.qsl.net/ke5fx
> > Note: My E-mail address has been altered to avoid spam
> > --
>
> Fantasic, John. You got my vote for MVPOTY. This is just what I have
> been looking for.
>
> "text and schematics to follow"
>
> Please hurry - is there anything we can do to help?
>
> (mvpoty - Most Valuable Post Of The Year)
>
> Regards,
>
> Mike Monett
> mrmonett@yahoo.com

Hopefully I'll have a schematic up there before long... it's not a
complex circuit but I don't feel like entering the 80-pin DDS part
myself. Although the ADF4112 is hand-wired (barely visible at right),
the AD9854 is mounted to a cutaway section of one of Richard Hosking's
PC boards, and we've been chatting about the possibility of doing a
board design for the whole synthesizer based on the AD9854 board he's
already done.

I'd certainly like to have some boards made up, because I could use a
couple more of these synthesizers, and I don't EVER want to wire up
another TSSOP package ugly-style.

-- jm

----
http://www.qsl.net/ke5fx

Note: My E-mail address has been altered to avoid spam
---

789. Where ? ARRL Radio Designer software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 18:55:51 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c52f26b.10181934@news.freeserve.net>
Source record: 46931

Hi Folks,
anyone know of a URL for the ARRL Radio Designer software ?.
It aint on the ARRL site anymore.
Thanks Mike W

790. Re: Where ? ARRL Radio Designer software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 19:14:28 UTC
From: ac6v <ac6v@amsat.org>
Message-ID: <3C530014.3EC0578C@amsat.org>
Source record: 46932

Mike see URL:
http://www.arrl.org/ard/
--
73 From AC6V, Rod In Oceanside, CA
I doubt, therefore I might be!

AC6V Mega Ham Index at http://ac6v.com
AC6V Book For DXers at http://ac6v.com/DXSAMPLE.htm
==========
Mike W wrote:

> Hi Folks,
> anyone know of a URL for the ARRL Radio Designer software ?.
> It aint on the ARRL site anymore.
> Thanks Mike W

m

791. Re: Where ? ARRL Radio Designer software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 19:49:55 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c53084f.15787158@news.freeserve.net>
Source record: 46933

Thanks Rod, but nothing there, it was discontinued in 2000. The
replacement, Serenade, is so large I can't download it in the time
allowed by my ISP :-(
atb Mike W

On Sat, 26 Jan 2002 11:14:28 -0800, ac6v <ac6v@amsat.org> wrote:

>Mike see URL:
>http://www.arrl.org/ard/
>--
>73 From AC6V, Rod In Oceanside, CA
>I doubt, therefore I might be!
>
>AC6V Mega Ham Index at http://ac6v.com
>AC6V Book For DXers at http://ac6v.com/DXSAMPLE.htm
>==
>Mike W wrote:
>
>> Hi Folks,
>> anyone know of a URL for the ARRL Radio Designer software ?.
>> It aint on the ARRL site anymore.
>> Thanks Mike W
>
>m
>
>

792. Re: Will it...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 19:52:55 UTC
From: Robert Casey <wa2ise@ix.netcom.com>
Message-ID: <3C530917.A436A678@ix.netcom.com>
Source record: 46934
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

rasw wrote:

> ...make my ANTENNA bigger too?
>

Only your rubber duckie. :-)

==========
Take the money and Enron! :-(

793. Re: Where ? ARRL Radio Designer software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 20:04:00 UTC
From: Bert Hyman <bert@visi.com>
Message-ID: <Xns91A28F18852BDVeebleFetzer@209.98.98.13>
Source record: 46935

In news:3c53084f.15787158@news.freeserve.net mike@corn2.freeserve.co.uk (Mike W) wrote:

> Thanks Rod, but nothing there, it was discontinued in 2000. The
> replacement, Serenade, is so large I can't download it in the time
> allowed by my ISP :-(

If that's a limitation you're going to have to live with for a long time, you should look into an FTP client that knows how to resume interrupted file transfers (assuming that the server supports the feature too).

I ->think the FTP client in MS IE5.x can do it, but I don't have the problem myself.

--
Bert Hyman St. Paul, MN bert@visi.com

794. Re: Where ? ARRL Radio Designer software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 20:05:55 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.com>
Message-ID: <CX42s9YjwwU8EAYy@ifwtech.com>
Source record: 46936

Mike W wrote:
>Hi Folks,
>anyone know of a URL for the ARRL Radio Designer software ?.
>It aint on the ARRL site anymore.

'ARRL Radio Designer' was a cut-down version of much more powerful software called 'Harmonica', but that has now developed and been absorbed into the 'Serenade' suite, which contains both 'Harmonica' and a system simulator called 'Symphony' (are we all keeping up with the music?)

Since the owners of 'Serenade' released a free Student Version that is much more powerful than 'ARRL Radio Designer', ARRL RD has been withdrawn.

There is a link from the ARRL site to the download site for SymphonySV.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.com/g3sek

795. Re: Where ? ARRL Radio Designer software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 20:21:47 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c530f29.17541904@news.freeserve.net>
Source record: 46937

On Sat, 26 Jan 2002 20:04:00 GMT, Bert Hyman <bert@visi.com> wrote:

>you should look into an FTP client that knows how to resume interrupted
>file transfers (assuming that the server supports the feature too).
>
>I ->think the FTP client in MS IE5.x can do it, but I don't have the
>problem myself.
>
Thanks Bert, I have got FtpPro which does have this feature, and I
tried it, but the relevant site would'nt give me access to their File
system.
Mike W

796. Re: Where ? ARRL Radio Designer software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 20:32:57 UTC
From: Bert Hyman <bert@visi.com>
Message-ID: <Xns91A2940102200VeebleFetzer@209.98.98.13>
Source record: 46938

In news:3c530f29.17541904@news.freeserve.net mike@corn2.freeserve.co.uk (Mike W) wrote:

>
> Thanks Bert, I have got FtpPro which does have this feature, and I
> tried it, but the relevant site would'nt give me access to their File
> system.

What happens if you do the download through your browser, rather than a stand-alone FTP client? As I said I ->think that MS IE5.x has the auto-resume feature built in, as does Opera; maybe yours (if it's something else) does too?

--
Bert Hyman St. Paul, MN bert@visi.com

797. Re: H-Mode mixer inquiry

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 20:35:21 UTC
From: "Harold E. Johnson" <W4ZCB@Home.com>
Message-ID: <dqE48.3591$gd.653336@news2.nash1.tn.home.com>
Source record: 46939

>
> Oh yes, there is also some information on the mixer in the 2001 ARRL
> handbook, section 15.28 seems to be the main page to look at.
>
It's also incorrect. Although they claim it's just an earlier schematic.
Much earlier.

> The handbook does not go into as much information about the hybrid
> splitters and dual crystal filters and so on, but some stuff on the the
> mixer itself is there.

798. DS-1A converter for Kenwood TS520S

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 21:32:31 UTC
From: Brad Sheppard & Jenn Kettle <bradjenn@nf.sympatico.ca>
Message-ID: <3c5320c9.0@209.128.1.3>
Source record: 46941
Cross-posted to:
rec.ham-radio,rec.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

A few years ago someone mailed a solution to the following problem to me,
but I have since lost it.

I have a Kenwood TS-520S, and I am wondering if anyone knows how to make a
homebrew power converter for the radio so I can run it from battery power.

Please respond via e-mail as I don't check the newsgroups often.

Thanks in advance,

Brad Sheppard
VO1XA

799. Re: Has anyone else heard/done this ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 21:35:54 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c53211b.493234874@news.erols.com>
Source record: 46940

On Fri, 25 Jan 2002 16:53:31 -0600, "Henry Kolesnik" <wd5jfr@oklahoma.net>
wrote:

>The 572 is capable of putting out more power but to do that you need to
>supply it more power!
>Remember that this is an amplifier and if you can load it to put out more
>power it'll draw more from the power supply.
>A little less than half the power will be used up in the plate resistance of
>the tube and dissipated as heat and most of the rest can be loaded into the
>antenna. Some of the power will be dissipated as heat in the internal
>resistance of the power supply.
>So if you install 572 and try to load it more, the internal resistance (read
>capability of the dc power supply) will be the limiting factor. Power output
>is effiency times volts times amps. I'll bet the that Ameritron didn't
>leave any reserve in that power supply so you if your that set on it build
>an outboard supply and put in the 572 and you'll get more power. A 572 can
>take 2400vdc on the plate and 600 watts whereas the 811 is rated for 1700vdc
>at 270 watts. The thought sounds good but it's too good to be true so I
>agree with the previous response to buy better coax and that'll help on rx
>as well. Two other things you should consider is a good used Heathkit SB
>200 or better yet Heathkit SB 220 with 3-500Z . Both are very good amps and
>very reasonably priced. Drake L7 and L4 are also very good but cost a
>little more. If you have to have the power find a good Heathkit and you'll
>be happy.
>
>"

Thx. for a great explanation. Sensible and to the point.

Reticulum

Remove "your.hat" when replying via e-mail

800. Re: Has anyone else heard/done this ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 21:52:11 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c532151.493288565@news.erols.com>
Source record: 46942

On Sat, 26 Jan 2002 00:53:49 GMT, <spagnet@austin.rr.com> wrote:

>His point was obvious to me, why spend a lot of time and a fair amount of
>money to modify a rig when there are lots of other ways to improve your
>signal by 1dB which are far more simple. You might argue that 1dB isn't
>worth it and I would understand, but your flaming a knowledgable person over
>a reasonable remark.
>
>KI5XW
>
Actually, I thought he was the one trying to start a fight. Imagine if
you came on here and asked for the values of horse and buggy rides
and were told that the only answer is you ought to buy a car. Whether
or not it's good advice, it doesn't answer the question, does it?? So it
looked to me like he was the one picking a fight. I've been in many ng's
which are populated by those who wait for you to say , " X ", and then
challenge why you'd even want to know when " Y " is so much better
For them. It's a kinda ego-trip I guess; a type of trolling. This is what I
thought Sam was doing.

Reticulum

Remove "your.hat" when replying via e-mail

801. Re: Has anyone else heard/done this ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 22:42:54 UTC
From: " .Your Friend Bill" <none@coqui.net>
Message-ID: <3C5330EE.CC0ECF47@coqui.net>
Source record: 46943

Reticulum wrote:
>
> On Sat, 26 Jan 2002 00:53:49 GMT, <spagnet@austin.rr.com> wrote:
>
> >His point was obvious to me, why spend a lot of time and a fair amount of
> >money to modify a rig when there are lots of other ways to improve your
> >signal by 1dB which are far more simple. You might argue that 1dB isn't
> >worth it and I would understand, but your flaming a knowledgable person over
> >a reasonable remark.
> >
> >KI5XW
> >
> Actually, I thought he was the one trying to start a fight. Imagine if
> you came on here and asked for the values of horse and buggy rides
> and were told that the only answer is you ought to buy a car. Whether
> or not it's good advice, it doesn't answer the question, does it?? So it
> looked to me like he was the one picking a fight. I've been in many ng's
> which are populated by those who wait for you to say , " X ", and then
> challenge why you'd even want to know when " Y " is so much better
> For them. It's a kinda ego-trip I guess; a type of trolling. This is what I
> thought Sam was doing.
>
> Reticulum
>
> Remove "your.hat" when replying via e-mail

I know SAM personally and you couldn't meet a nicer guy. I can assure
you that his post wasn't laced with bad feelings or an attempt to incite
anything. I too questioned myself the point of the expensive and
potentially troublesome "1db effort" when I read your original post
before he even replied. Granted he didn't directly answer the question,
but he certainly addressed it and I think the point has since become
clear.
Newsgroup activity is not for the thin-skinned...I don't have to go too
far back into your posts to remind you of that.

Regards,
Bill WX4A

802. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 22:55:31 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0201261455.517b13e2@posting.google.com>
Source record: 46944
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3C52E76F.4BED@pop.removethistomailme.net>...

> > (mvpoty - Most Valuable Post Of The Year)
> >
> > Regards,
> >
> > Mike Monett
> > mrmonett@yahoo.com

> Hopefully I'll have a schematic up there before long... it's not a
> complex circuit but I don't feel like entering the 80-pin DDS part
> myself.

Don't blame you at all. How about a simple square block just showing
the inputs and outputs?

What kind of vco are you using? You didn't mention this so far.

> Although the ADF4112 is hand-wired (barely visible at right),
> the AD9854 is mounted to a cutaway section of one of Richard Hosking's
> PC boards, and we've been chatting about the possibility of doing a
> board design for the whole synthesizer based on the AD9854 board he's
> already done.

That would be very interesting.

> I'd certainly like to have some boards made up, because I could use a
> couple more of these synthesizers, and I don't EVER want to wire up
> another TSSOP package ugly-style.

The first time is the hardest :)

> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

803. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-26 23:09:24 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c533665$0$508@echo-01.iinet.net.au>
Source record: 46945
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John
I should be able to have a schematic done by the end of the week. BTW do you want shielding between different sections of the board? I note that you have it in your prototype

Richard

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message news:3C52E76F.4BED@pop.removethistomailme.net...
> Mike Monett wrote:
> >
> > John Miles <jmiles@pop.removethistomailme.net> wrote in message news:<3C527C65.27E4@pop.removethistomailme.net>...
> > > Page updated at http://www.qsl.net/ke5fx/synth.html with photo and
> > > screenshots; more to come.
> > >
> > > -- jm
> > >
> > > --
> > > http://www.qsl.net/ke5fx
> > > Note: My E-mail address has been altered to avoid spam
> > > --
> >
> > Fantasic, John. You got my vote for MVPOTY. This is just what I have
> > been looking for.
> >
> > "text and schematics to follow"
> >
> > Please hurry - is there anything we can do to help?
> >
> > (mvpoty - Most Valuable Post Of The Year)
> >
> > Regards,
> >
> > Mike Monett
> > mrmonett@yahoo.com
>
> Hopefully I'll have a schematic up there before long... it's not a
> complex circuit but I don't feel like entering the 80-pin DDS part
> myself. Although the ADF4112 is hand-wired (barely visible at right),
> the AD9854 is mounted to a cutaway section of one of Richard Hosking's
> PC boards, and we've been chatting about the possibility of doing a
> board design for the whole synthesizer based on the AD9854 board he's
> already done.

>
> I'd certainly like to have some boards made up, because I could use a
> couple more of these synthesizers, and I don't EVER want to wire up
> another TSSOP package ugly-style.
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

804. Re: Has anyone else heard/done this ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 00:06:30 UTC
From: jcplpsm@aol.communicate
Message-ID: <20020126190630.27539.00000577@mb-df.aol.com>
Source record: 46946

>You must not chase much DX or hang out very often on 75/80M
> or 160M.

I apologize for the tone of my response. I was not trying to "pick a fight", just replied on the fly and didn't have a lot of time to elaborate. I figured I'd make the point without a lot of unnecessary words.

>If you have knowledge you can share about increasing signal strength
>then I'd love to hear it.

That's what I was trying to do. The fact is, regardless of whether you add 1 dB with an amp, or 1 dB with less feedline loss, its still 1 dB. There is no difference. The 1 dB that you gain with the amp is not going to get you through a pileup any better than the 1 dB you gain with less feedline loss.

>Do you really think that better coax is gonna break a massive
>pile-up of rich old hams who can all afford Henry 3 or5 KW's ???

Not any more that increasing your power from 600 watts to 800 watts will.

I don't run an amp here, but I don't feel any way about those who do, either. I have worked a fair amount of DX with 100 watts and rarely am disappointed. That's just the way I operate. I never said anything bad about running power, nor did I say anything about running QRP, Those were your thoughts, not mine.

Scott M.

805. Re: Spread Spectrum Homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 00:21:16 UTC
From: Scott <ve3hsc@hotmail.com>
Message-ID: <heh65uc81kfpn3fbmueqoa3alagm2ccdds@4ax.com>
Source record: 46847

Are you the Clive from ve3QDR qrp club.?

scott

On Thu, 24 Jan 2002 13:55:53 GMT, c.a.m@nospam.blueyonder.co.uk wrote:

>
>Clive

806. G-R 916 or 1606 Bridge wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 02:25:17 UTC
From: Old Man <ebjr@i-55.com>
Message-ID: <a2voc3$m11$1@news.datasync.com>
Source record: 46848
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Looking for a serviceable, operating General Radio
916 or 1606 RF Bridge. For cash or trade other old
gear.
73,
Sandy W5TVW

807. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 03:06:15 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C536F55.23C8@pop.removethistomailme.net>
Source record: 46850
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett wrote:
>
> Don't blame you at all. How about a simple square block just showing
> the inputs and outputs?

Well, here's the circuit description that I sent to Richard (with a few corrections I've already passed on to him) and additional notes in parentheses. This is the basis for the schematic and board layout he's working on.

------snip email to Richard-----

Basically, I started with the circuit for your (Richard's) DDS board, using an AD9854ASQ chip. (The cheaper -AST chip would be fine, too, since it doesn't need to run very fast, 100 MHz or thereabouts.) It is wired the same as your board (see Richard's board at http://members.iinet.net.au/~richardh/VK6BRO.htm, a steal at US $20 for anyone who doesn't need the full PLL monty!), with the following exceptions:

- The A2IOR line is permanently grounded (there's no need to ever read from the DDS chip, as far as I can tell)

- The CS chip select line, ditto

- Same for FSKHOL and SHKEY

- The comparator circuitry is omitted (R16-R19 and C17, C19)

- The clock is supplied externally through an SMA jack terminated in 51 ohms

- The clock jack feeds the center junction of two 1K resistors going between AVDD and ground via a 0.001 uF blocking capacitor (you may want to make this optional if you wish to include an onboard clock option like you have now)

- The power-supply regulators are replaced with Linear Technology LT1086 chips (just what I had available, yours are fine too, I'm sure) bolted to the 1590 chassis as a heat sink and fed by +12V

- Aside from the usual bypass capacitors, there is a 100 uH RF choke (from Radio Shack) between U2 and the AVDD connection point on the DDS board. At least with the LT1086 regulators, this improves the DDS broadband noise floor substantially.

I didn't need a latch feature for my purposes, so I omitted U5. My 5V-to-3.3V interface is simply the junction of a 10K resistor to ground and a 3.3K resistor to each of the following LPT port pins:

- LPT pin 9 to RESET (DDS pin 71 controlled by printer port bit 7)

- LPT pin 8 to IOUD (DDS pin 20 controlled by printer port bit 6, R9 omitted)

- LPT pin 3 to WRB/SC (DDS pin 21 controlled by printer port bit 2)

- LPT pin 2 to A0/SDI (DDS pin 19 controlled by printer port bit 1)

The output low-pass filters are omitted. Instead, a connection is made from DDS pin 49 (I output at R4) through a 0.1 uF capacitor to the primary of a Mini-Circuits T1-6T transformer. The other end of the primary is grounded. The secondary of this transformer feeds a Toko America SK107M3N-AO-20 ceramic filter (Digi-Key part # TK2307-ND, 10.7 MHz center frequency, 180 kHz bandwidth with Zmatch=330 ohms), which in turn drives the secondary of another T1-6T transformer to get back down to 50 ohms.

The level at the output of the second T1-6T transformer is about -18 dBm. It is amplified by a Mini-Circuits MAV-11 MMIC (http://www.minicircuits.com/cgi-bin/amplifier?model=MAV-11&pix=bbb123.gif&bv=4) with 0.1 uF coupling capacitors on either side, biased by 12 volts through a 120-ohm, 1-watt resistor with a 0.1 uF decoupling capacitor at the power-supply feed point. The level after the MAV-11 is approximately -8 dBm. The coupling capacitor at the MAV-11's output feeds a Mini-Circuits PLP-10.7 low-pass filter (http://www.minicircuits.com/dg02-162.pdf), whose purpose is to get rid of higher-order harmonics and DDS images that the ceramic filter won't attenuate very well.

The output of the PLP-10.7 filter is terminated with a 51-ohm resistor to ground. A 0.1 uF coupling capacitor feeds pin 2 of a Linear Technologies LT1016 high-speed comparator (http://www.linear-tech.com/pdf/1016fc.pdf). This is an 8-pin DIP that serves to convert the filtered DDS signal to 5V CMOS-compatible levels. Driving the phase detector chip with a rail-to-rail square wave is good for 2-3 dB of in-band phase noise improvement, at least with the LMX2326 chip. (I actually don't know if this is still true of the ADF4112, as I didn't try it without the comparator. It seems like a safe bet, though. It might be worth using the AD9854's built-in 3.3V comparator instead if board space is at a premium.)

Pin 2 of the LT1016, the noninverting signal input, is biased halfway to the +5V rail with two 1K resistors in series between power and ground. Another 1K resistor is placed between pins 2 and 3 to raise the inverting input to the same DC level. Pin 3 has a 0.1 uF bypass to ground to keep it from trying to follow the AC component of the input signal. Pins 4, 5 and 6 are grounded, with +5V Vcc at pin 1.

The comparator output at pin 8 (~Q) goes directly to pin 8 (REFin) of an Analog Devices ADF4112 phase-frequency detector chip. The ADF4112 is a 16-pin TSSOP package, available by direct order in small quantities from www.analog.com. The connections to this chip are basically as shown in the data sheet at http://products.analog.com/products/info.asp?product=ADF4112:

- Pin 1 has a 4.7K resistor to ground
- Pin 2 is the charge pump output to the OP27 op-amp, below
- Pins 3, 4, and 9 are grounded
- Pin 5 is bypassed to ground with 100 pF
- Pin 6 is the input from the VCO, below
- Pin 7 is the analog supply (+5)
- Pin 8 is the reference input from the LT1016 as noted above
- Pins 10 and 15 are tied to the digital +5 supply
- Pin 11 is connected directly to the LPT port pin 3 (not through the 10K/3.3K divider since this is a 5V chip)
- Pin 12 is connected directly to the LPT port pin 2
- Pin 13 is connected to LPT port pin 7
- Pin 14 is connected to LPT port pin 15
- Pin 16 is the charge-pump supply (+5)

(To use the more commonly-available National LMX2326 PLLatinum chip, leave out the resistor at pin 1. This requires changes to the control software and loop filter, but I believe the performance will ultimately be the same.)

Between the ADF4112 charge-pump output at pin 2 and the VCO is an OP27 low-noise opamp (http://focus.ti.com/docs/prod/folders/print/op27.html). This is an 8-pin DIP available from numerous vendors at www.findchips.com (although DigiKey seems to be out of stock at the moment).

The OP27 serves to interface the 5V phase-detector chip to the VCO, whose tuning line needs about 18V to tune to 2 GHz. The OP27 is powered (at pin 7) by a +20V power source, decoupled with a 47 uF capacitor and 1 mH RF choke. Like everything else in the circuit, the OP27 needs clean power -- its own common-mode supply rejection is not enough.

The OP27's non-inverting input is tied midway between +5 and ground with two 10K resistors. There is a 0.1 uF bypass capacitor at their junction.

The first and second poles of the loop filter in my circuit consist of two 1-uF polyester capacitors in parallel (at least 35 volt rating needed here, and the caps should be nonpolarized -- no aluminum electrolytics) in series with a parallel combination of a 0.22 uF tantalum or metal-film cap (no ceramics!) and 82-ohm resistor. This filter goes between pin 2 (inverting input) and pin 6 (output) of the OP27.

The loop filter also has a third pole intended to clean up as much of the op-amp's own noise as possible. It consists of a 100 ohm resistor

between pin 6 of the OP27 and the VCO's tuning line. A 0.1 uF tantalum (no ceramics) and a 100 pF silver-mica are paralleled between the VCO tuning line and ground, as close to the VCO as possible.

Some say that metal-film resistors are 'quieter' than carbon-film types, but I never saw any difference in my tests. It might be true for larger values. Carbon-composition resistors are supposedly among the noisiest of all, so try to steer clear of them in the loop filter.

I would suggest leaving plenty of room and ample connection-pad area for the loop filter components, since people like to tweak these. Some builders may want to use smaller capacitors for faster locking, for instance. Same with the VCO... the ADF4112 is usable with any VCO between 100 MHz and 3 GHz, so it would be nice to make it easy for people to adapt the board for different VCO modules.

The VCO is a Mini-Circuits ROS-2150VW (data and pinout at http://www.minicircuits.com/cgi-bin/vco?model=ROS-2150VW&pix=ck605.gif&bv=4). It runs on +5 volts, and its RF output is connected to one leg of a Y-network of three 22 ohm resistors. One of the other 22-ohm "legs" drives a 51-ohm resistor whose opposite end is grounded. The junction of this 22-ohm and 51ohm resistor is coupled through a 0.001 uF capacitor to pin 6 of the ADF4112. Obviously these lines need to either be very short (millimeters!), or they need to be designed as 50-ohm transmission lines, because they carry the 1-2 GHz signal from the VCO.

The final 22-ohm resistor in the splitter network feeds the input pin of a Mini-Circuits ERA-5 MMIC (http://www.minicircuits.com/cgi-bin/amplifier?model=ERA-5&pix=vv105.gif&bv=4) through a 0.001 uF coupling capacitor. The ERA-5 is biased with +12V through a 100-ohm 1-watt resistor and a Mini-Circuits ADCH-80A broadband RF choke (http://www.minicircuits.com/dg02-210.pdf). The RF choke should be mounted directly adjacent to the ERA-5, with the resistor between it and +12V.

The synthesizer output is coupled from the junction of the ADCH-80A and ERA-5 output pin via a 0.001 uF capacitor to an SMA jack. The output level is nominally +11 dBm, varying +/- 3dB between 1000 and 2000 MHz.

That's all there is to it, really, except for the +5V power distribution. I used a 7805 regulator (again, bolted to the chassis to serve as a heat sink) off the +12V bus, which itself came from a 7812. The 7812 also feeds the two 3.3-volt LT1086 regulators for the DDS subsystem.

The output of a 78xx regulator is very rich in broadband noise, so it has to be filtered heavily before being used in a PLL. I used a 1 mH RF choke at the 7805 output, feeding a 47 uF bypass capacitor (tantalum or aluminum electrolytic). There are five more 1 mH RF chokes connected to this node, each with its own 0.1 uF ceramic / 2.2 uF tantalum bypasses to the ground plane. Three of these RF chokes feed the ADF4112's digital, analog, and phase-detector power-supply pins; the fourth

supplies the LT1016 comparator at pin 1; and the fifth supplies the VCO.

Make sure the 1 mH chokes above are rated for at least 100 mA of current. Total current drain on the +5V line is about 60 mA. The DDS subsystem will require about 400 mA at a clock rate of 100 MHz, when configured with my software (Q DAC, comparator, and sinc filter turned off).

At first, I tried running the "master" 7812 from the same +20V bus that feeds the OP27, but it just generated too much heat. So I added a second feedthrough cap to my chassis, and ran +15V to the 7812 and +20 to the OP27 (+24 is fine too, but +18 may not be enough to tune the VCO to 2 GHz reliably). The chassis still runs warm (probably ~40-50C), but not burning hot like it did with a single +20V supply.

----------end snip----------

>
> What kind of vco are you using? You didn't mention this so far.

See above. Usually, good engineering practice in a PLL with this kind of coverage calls for two or more high-quality VCOs for reduced tuning sensitivity and (consequently) lower phase noise outside the loop bandwidth. That's what the R7000 receiver does, which is how they're able to pull ahead of me in the wideband phase-noise plot with up to 7 dB better PN at the all-important 12.5-kHz channel-spacing offset. But that would complicate the design substantially, and for my application, it just isn't worth the hassle for the difference between -105 and -98 dBc noise levels.

If you need better noise performance, you would want to start by upgrading the $30 Mini-Circuits VCO, either by splitting the coverage range across multiple VCOs or by using a quieter, more expensive part (like a surplus YIG oscillator). The VCO is definitely the weakest link in my design.

After that, a narrower DDS filter (say a +/- 15 kHz-wide crystal filter) would bring a further improvement in both SFDR and broadband noise.

Finally, it might be worth looking for a quieter op-amp (or a discrete-transistor charge pump amplifier as suggested by Dean Banerjee at NSC, something the Icom people used to good effect with a JFET current source). Watch out for opamps that seem quiet in the nV/root-Hz department but have a high input current spec that will load the phase detector, though.

-- jm

----
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
----

808. Astron VS schematic needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 03:08:01 UTC
From: K8WOS <k8wos@citynet.net>
Message-ID: <3c536c02_2@corp.newsgroups.com>
Source record: 46851

I need a copy of a schematic of one of the Astron VS series power supplies.
Anyone out there have one that they could send me a copy? Thanks

Bill

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

809. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 03:23:02 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C537345.45FB@pop.removethistomailme.net>
Source record: 46852
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Richard Hosking wrote:
>
> John
> I should be able to have a schematic done by the end of the week. BTW do you
> want shielding between different sections of the board? I note that you have
> it in your prototype
>

The reason for the vertical shield and 4 feedthrough caps in my chassis
was to keep any digital hash on the parallel-port lines as far away from
the PLL-VCO path as possible. I probably went overboard with that... at
any rate, RF decoupling of the digital control lines can be left off the
board and up to the individual builder.

Why don't you just surround the DDS chip and its associated filters with
a "firewall" of adjacent pads that are connected with vias to the ground
plane? That way, if it turns out we need to physically wall off the
digital components from the rest of the PLL, it'll be easy. Otherwise,
no harm done.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

810. Re: Has anyone else heard/done this ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 03:38:05 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c5375f9.514964210@news.erols.com>
Source record: 46853

>I know SAM personally and you couldn't meet a nicer guy. I can assure
>you that his post wasn't laced with bad feelings or an attempt to incite
>anything. I too questioned myself the point of the expensive and
>potentially troublesome "1db effort" when I read your original post
>before he even replied. Granted he didn't directly answer the question,
>but he certainly addressed it and I think the point has since become
>clear.

Point taken.

>Newsgroup activity is not for the thin-skinned...I don't have to go too
>far back into your posts to remind you of that.
>
>Regards,
>Bill WX4A
>

Reticulum

Remove "your.hat" when replying via e-mail

811. FAR Circuits kaput?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 03:52:13 UTC
From: nx7u@mindspring.com
Message-ID: <3c537942.2227631@nntp.mindspring.com>
Source record: 46849

Haven't been able to access their website all week, left them a
telephone message but no reply...
Am I "the last to know" or am I "making a mtn out of a molehill"?

812. Re: Has anyone else heard/done this ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 04:51:22 UTC
From: "Al, N2NKB"
Message-ID: <eHL48.4724$mU4.294855@bgtnsc06-news.ops.worldnet.att.net>
Source record: 46854

SAM wrote in message <20020126190630.27539.00000577@mb-df.aol.com>...
>>You must not chase much DX or hang out very often on 75/80M
>> or 160M.
>
>I apologize for the tone of my response. I was not trying to "pick a fight",
>just replied on the fly and didn't have a lot of time to elaborate. I figured
>I'd make the point without a lot of unnecessary words.
>
>>If you have knowledge you can share about increasing signal strength
>>then I'd love to hear it.
>
>That's what I was trying to do. The fact is, regardless of whether you add 1
>dB with an amp, or 1 dB with less feedline loss, its still 1 dB. There is no
>difference. The 1 dB that you gain with the amp is not going to get you
>through a pileup any better than the 1 dB you gain with less feedline loss.
>
>>Do you really think that better coax is gonna break a massive
>>pile-up of rich old hams who can all afford Henry 3 or5 KW's ???
>
>Not any more that increasing your power from 600 watts to 800 watts will.
>
>I don't run an amp here, but I don't feel any way about those who do, either. I
>have worked a fair amount of DX with 100 watts and rarely am disappointed.
>That's just the way I operate. I never said anything bad about running power,
>nor did I say anything about running QRP, Those were your thoughts, not mine.
>
>Scott M.
>

Many folks (that do not subscribe to this NG) don't realize how important the feedline is.
Not to mention that a 1dB loss is a
direct hit to the receiver's noise figure, which cannot be made up with an amplifier.

Reminds me of a 2 meter repeater that was interfering with our HAM club's repeater.
The repeater's output was 100W, and the person responsible for it agreed to lower the
power by 3 dB. But when we talked "watts", he said he could lower the power by 3 dB, but
refused to lower the power from 100W to 50W ! :-)
Al

813. Re: Has anyone else heard/done this ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 05:23:20 UTC
From: spagnet@austin.rr.com
Message-ID: <c9M48.31712$ZK4.1078764@typhoon.austin.rr.com>
Source record: 46855

I guess I can share that opinion...there is nothing more frustrating than to ask advice and not get the answer you're looking for.

KI5XW

"Reticulum" <Cathexis@yourhaterols.com> wrote in message news:3c532151.493288565@news.erols.com...
> On Sat, 26 Jan 2002 00:53:49 GMT, <spagnet@austin.rr.com> wrote:
>
> >His point was obvious to me, why spend a lot of time and a fair amount of
> >money to modify a rig when there are lots of other ways to improve your
> >signal by 1dB which are far more simple. You might argue that 1dB isn't
> >worth it and I would understand, but your flaming a knowledgable person over
> >a reasonable remark.
> >
> >KI5XW
> >
> Actually, I thought he was the one trying to start a fight. Imagine if
> you came on here and asked for the values of horse and buggy rides
> and were told that the only answer is you ought to buy a car. Whether
> or not it's good advice, it doesn't answer the question, does it?? So it
> looked to me like he was the one picking a fight. I've been in many ng's
> which are populated by those who wait for you to say , " X ", and then
> challenge why you'd even want to know when " Y " is so much better
> For them. It's a kinda ego-trip I guess; a type of trolling. This is what I
> thought Sam was doing.
>
>
> Reticulum
>
> Remove "your.hat" when replying via e-mail

814. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 09:36:34 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.com>
Message-ID: <8MYJqlGio8U8EAfg@ifwtech.com>
Source record: 46860
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Miles wrote:
>Richard Hosking wrote:
>>
>> John
>> I should be able to have a schematic done by the end of the week. BTW do you
>> want shielding between different sections of the board? I note that you have
>> it in your prototype
>>
>
>The reason for the vertical shield and 4 feedthrough caps in my chassis
>was to keep any digital hash on the parallel-port lines as far away from
>the PLL-VCO path as possible. I probably went overboard with that... at
>any rate, RF decoupling of the digital control lines can be left off the
>board and up to the individual builder.
>
>Why don't you just surround the DDS chip and its associated filters with
>a "firewall" of adjacent pads that are connected with vias to the ground
>plane? That way, if it turns out we need to physically wall off the
>digital components from the rest of the PLL, it'll be easy. Otherwise,
>no harm done.
>
Interesting design point: I've always found it much easier to throw in additional shielding and decoupling at the design stage. We never actually know whether all of those extras are going to be needed, but as JM says, they do no harm. But they do increase the chances that the circuit will work well, first time.

In amateur radio, I value my time a lot more than the cost of the extra small components. My first priority is always to get the project successfully completed, because the "wanna do" list is always growing!

I was going to say that "Obviously this isn't a cost-effective way of designing commercial products", where component and assembly costs can add up over long production runs - but as I write, I'm realising that isn't necessarily true. In the control boards that I sell for amateur power amplifiers, I've designed in lots of protection against external RF fields. Many customers will not need all of that protection... but there have been no callbacks about RFI problems, so maybe over-design was a good commercial decision too.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.com/g3sek

815. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 10:57:31 UTC
From: rexa*non*spam*@dnai.com
Message-ID: <69m75uso5iai2hrhd12osb7k7h3p93s6ij@4ax.com>
Source record: 46856
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John,

Very interesting design with current nify chips.

So on the ADF4112, you dead-bugged the TSSOP package for your prototype? (I assume that means glue the chip with legs up and solder wires to it.) No wonder you don't want to do that again. Just curious what gage wire you were soldering to the chip. I would think even 30 ga would be big to solder to a TSSOP package.

One small question, below, on your description of the circuit.

Thanks for sharing,
Rex, KK6MK

On Sun, 27 Jan 2002 03:06:15 GMT, John Miles
<jmiles@pop.removethistomailme.net> wrote:

>The level at the output of the second T1-6T transformer is about -18
>dBm. It is amplified by a Mini-Circuits MAV-11 MMIC
>with 0.1 uF coupling capacitors on either side, biased by 12 volts
>through a 120-ohm, 1-watt resistor with a 0.1 uF decoupling capacitor at
^^^^^^^^^^^^^^^
>the power-supply feed point.

Was the 1-watt a typo? Seems excessive for a MMIC, but with 12 V
feed maybe you need at least 1/2 watt.

816. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 11:02:05 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0201270302.53b2530c@posting.google.com>
Source record: 46857
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3C536F55.23C8@pop.removethistomailme.net>...
> Mike Monett wrote:
> >
> > Don't blame you at all. How about a simple square block just showing
> > the inputs and outputs?
>
> Well, here's the circuit description that I sent to Richard (with a few
> corrections I've already passed on to him) and additional notes in
> parentheses. This is the basis for the schematic and board layout he's
> working on.

[...snip good description]

> If you need better noise performance, you would want to start by
> upgrading the $30 Mini-Circuits VCO, either by splitting the coverage
> range across multiple VCOs or by using a quieter, more expensive part
> (like a surplus YIG oscillator). The VCO is definitely the weakest link
> in my design.
>
> After that, a narrower DDS filter (say a +/- 15 kHz-wide crystal filter)
> would bring a further improvement in both SFDR and broadband noise.
>
> Finally, it might be worth looking for a quieter op-amp (or a
> discrete-transistor charge pump amplifier as suggested by Dean Banerjee
> at NSC, something the Icom people used to good effect with a JFET
> current source). Watch out for opamps that seem quiet in the nV/root-Hz
> department but have a high input current spec that will load the phase
> detector, though.
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

Hi Jim,

Thanks for the excellent info. You have a thoroughly professional
design, and I am anxiously waiting for the schematics and more info.
In the meantime, I collected some information that may be of interest
if you haven't come across it already. Here's a copy-paste from my
notes:

On reducing regulator noise, Wenzel has some comments on "Finesse Voltage Regulator Noise" at

http://www.wenzel.com/documents/finesse.html

Fred Walls uses a Darlington configuration in series with VCC with bypassing on the base in "Guidelines for Designing BJT Amplifiers with Low 1/f AM and PM Noise"

http://www.boulder.nist.gov/timefreq/general/pdf/1139.pdf

There's some interesting articles on reducing synthesizer noise listed in "NIST Time and Frequency Publications"

http://www.boulder.nist.gov/cgi-bin/showpubs.pl

Many of the articles are dated but still of interest.

Ulrich Rohde shows a neat trick for reducing oscillator flicker noise in Fig. 15 of "Oscillator Basics and Low-Noise Techniques for Microwave Oscillators and VCOs"

http://www.synergymwave.com/publications/PDF/Oscillators.pdf

He claims a 15 dB reduction in close-in noise using the tecnique in "Analyze VCOs And Fractional-N Synthesizers", which used to be at

http://www.mwrf.com/2000/aug1500/057-078.html

but that url is no longer valid. Also, the idea is probably patented by now, but individuals can try it for experiments.

Adding DC stabilization would mean removing the can of the Minicircuits vco, but it might be worth it!

Regards,

Mike Monett
mrmonett@yahoo.com

817. Re: Where ? ARRL Radio Designer software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 11:05:23 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <V5S48.34534$Ph2.5947079@news2-win.server.ntlworld.com>
Source record: 46859

> Thanks Rod, but nothing there, it was discontinued in 2000. The
> replacement, Serenade, is so large I can't download it in the time
> allowed by my ISP :-(
> atb Mike W
==========
Mike , If you download a prog. called 'Go!Zilla' you will be able to
continue downloading any prog. or file at a future log-on session. Go!Zilla
just arranges for the downloading to continue where it stopped at a previous
session.

Good Luck

Frank gm0csz.kn6wh@ntlworld.com

818. Books on construction techniques

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 11:50:48 UTC
From: Richard Daventry <newsgps_email@ntlworld.com>
Message-ID: <aPR48.33107$ka7.5632897@news6-win.server.ntlworld.com>
Source record: 46858

Are there any books dedicated entirely to construction techniques? I don't seem to be able to find that sort of thing. I'm wanting a book or whatever, that will cover point-to-point wiring, chassis construction, PCB construction etc. Any good links to articles on the web even. (I have some). I've got components ready to go, but I need to settle things on the mechanical side as to how to build my tube and solid state projects. Anybody employ filing cabinets? Thanks. Rich.

819. Re: Books on construction techniques

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 12:53:58 UTC
From: Richard Daventry <newsgps_email@ntlworld.com>
Message-ID: <oLS48.35052$Ph2.5983445@news2-win.server.ntlworld.com>
Source record: 46861

It's not so much a dearth of material relating to PCB construction, as to other issus such as material about chassis construction techniques or ideas. That's why I mentioned filing cabinets. I'm wanting to build every major project in the same style of chassis I think, so everything matches. I was thinking about chassis size that goes with 19" rack mounted equipment. Can you buy that size of box chassis. I don't seem to have come across anything for sale. Then again I could make my own chassis, but I'd need a jig I think, some kind of former/bender. Then again I could pick out a filing cabinet size and design around that. I'm just looking for ideas really. My first projects are tube based Rx Tx.

820. Re: Books on construction techniques

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 13:06:50 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <%aU48.36226$Ph2.6064326@news2-win.server.ntlworld.com>
Source record: 46863

> That's why I mentioned filing cabinets. I'm wanting to build every major
> project in the same style of chassis I think, so everything matches. I
was
> thinking about chassis size that goes with 19" rack mounted equipment.
Can
> you buy that size of box chassis. I don't seem to have come across
anything
> for sale. Then again I could make my own chassis, but I'd need a jig I
> think, some kind of former/bender. Then again I could pick out a filing
> cabinet size and design around that. I'm just looking for ideas really.
My
> first projects are tube based Rx Tx.
==========
Have good look on flea markets ,not necessarily related to
radio equipment but also related to computers and general electronic
'junk'.
I found an old PDP-11 machine in its 19 inch housing and stripped the
cabinet.
From the elements you can build a custom cabinet for whatever purpose.
19 Inch cabinets are also used for fire alarm systems etc. I am sure scrap
yards
are also a potential source for this type of material

Good Luck

Frank gm0csz.kn6wh@ntlworld.com

>
>

821. Re: Astron VS schematic needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 13:17:51 UTC
From: rob34 <rob34@infinet.com>
Message-ID: <3c53fe0b$0$37101$4c5ecdc7@news.erinet.com>
Source record: 46862

Bama has schematics for astron RS series.I don`t know how similar they are
,but it might be worth cheking out.Here is the site: http://bama.sbc.edu/
Rob
"K8WOS" <k8wos@citynet.net> wrote in message
news:3c536c02_2@corp.newsgroups.com...
> I need a copy of a schematic of one of the Astron VS series power
supplies.
> Anyone out there have one that they could send me a copy? Thanks
>
> Bill
>
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

822. Re: Books on construction techniques

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 15:12:20 UTC
From: Richard Daventry <newsgps_email@ntlworld.com>
Message-ID: <ZLU48.34039$ka7.5793919@news6-win.server.ntlworld.com>
Source record: 46864

"Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote in message
news:%aU48.36226$Ph2.6064326@news2-win.server.ntlworld.com...
> ==========
> Have good look on flea markets ,not necessarily related to
> radio equipment but also related to computers and general electronic
> 'junk'.
> I found an old PDP-11 machine in its 19 inch housing and stripped the
> cabinet.
> From the elements you can build a custom cabinet for whatever purpose.
> 19 Inch cabinets are also used for fire alarm systems etc. I am sure scrap
> yards
> are also a potential source for this type of material

There is this problem though if I want things to match. I have 3 table-top cabinet shells from:, a marine radiotelephone (Ajax), Hallicrafters HT32 (nice) and (potentially) Labgear LG50, . Then I have a 19" cabinet 38" tall. All completely different!! Reproducability at any time in the future is important to me. Thought about getting a few HT32 cabinets, but not easy I don't think. Especially from within UK. Anyone in UK got any?

823. Re: Has anyone else heard/done this ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 15:41:31 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <u587trs3vl3h58@corp.supernews.com>
Source record: 46865

so what are you going to do?
"Reticulum" <Cathexis@yourhaterols.com> wrote in message
news:3c53211b.493234874@news.erols.com...
> On Fri, 25 Jan 2002 16:53:31 -0600, "Henry Kolesnik" <wd5jfr@oklahoma.net>
> wrote:
>
> >The 572 is capable of putting out more power but to do that you need to
> >supply it more power!
> >Remember that this is an amplifier and if you can load it to put out more
> >power it'll draw more from the power supply.
> >A little less than half the power will be used up in the plate resistance
of
> >the tube and dissipated as heat and most of the rest can be loaded into
the
> >antenna. Some of the power will be dissipated as heat in the internal
> >resistance of the power supply.
> >So if you install 572 and try to load it more, the internal resistance
(read
> >capability of the dc power supply) will be the limiting factor. Power
output
> >is effiency times volts times amps. I'll bet the that Ameritron didn't
> >leave any reserve in that power supply so you if your that set on it
build
> >an outboard supply and put in the 572 and you'll get more power. A 572
can
> >take 2400vdc on the plate and 600 watts whereas the 811 is rated for
1700vdc
> >at 270 watts. The thought sounds good but it's too good to be true so I
> >agree with the previous response to buy better coax and that'll help on
rx
> >as well. Two other things you should consider is a good used Heathkit SB
> >200 or better yet Heathkit SB 220 with 3-500Z . Both are very good amps
and
> >very reasonably priced. Drake L7 and L4 are also very good but cost a
> >little more. If you have to have the power find a good Heathkit and
you'll
> >be happy.
> >
> >"
>
> Thx. for a great explanation. Sensible and to the point.
>
> Reticulum
>

> Remove "your.hat" when replying via e-mail

824. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 16:27:04 UTC
From: Kijoma <bill_news@kijoma.com>
Message-ID: <3c542165_4@news1.meganetnews.com>
Source record: 46866
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Why use the ad9854 agn?, would the 9852 do the job?

and for 100MHz clock the 9850/1?

or is this using the quadrature outputs?

--
Bill Lewis
Engineering Director
Kijoma Solutions Ltd
RF - Analogue - Digital - Software
Electronic Product Design & Consultancy
Email : Bill.Lewis_@_kijoma.com (removes the _'s)

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message
news:3C536F55.23C8@pop.removethistomailme.net...
> Mike Monett wrote:
> >
> > Don't blame you at all. How about a simple square block just showing
> > the inputs and outputs?
>
> Well, here's the circuit description that I sent to Richard (with a few
> corrections I've already passed on to him) and additional notes in
> parentheses. This is the basis for the schematic and board layout he's
> working on.
>
> ------snip email to Richard-----
>
> Basically, I started with the circuit for your (Richard's) DDS board,
> using an AD9854ASQ chip. (The cheaper -AST chip would be fine, too,
> since it doesn't need to run very fast, 100 MHz or thereabouts.) It is
> wired the same as your board (see Richard's board at
> http://members.iinet.net.au/~richardh/VK6BRO.htm, a steal at US $20 for
> anyone who doesn't need the full PLL monty!), with the following
> exceptions:
>
> - The A2IOR line is permanently grounded (there's no need to ever read
> from the DDS chip, as far as I can tell)
>
> - The CS chip select line, ditto
>
> - Same for FSKHOL and SHKEY
>
> - The comparator circuitry is omitted (R16-R19 and C17, C19)

>
> - The clock is supplied externally through an SMA jack terminated in 51
> ohms
>
> - The clock jack feeds the center junction of two 1K resistors going
> between AVDD and ground via a 0.001 uF blocking capacitor (you may want
> to make this optional if you wish to include an onboard clock option
> like you have now)
>
> - The power-supply regulators are replaced with Linear Technology LT1086
> chips (just what I had available, yours are fine too, I'm sure) bolted
> to the 1590 chassis as a heat sink and fed by +12V
>
> - Aside from the usual bypass capacitors, there is a 100 uH RF choke
> (from Radio Shack) between U2 and the AVDD connection point on the DDS
> board. At least with the LT1086 regulators, this improves the DDS
> broadband noise floor substantially.
>
> I didn't need a latch feature for my purposes, so I omitted U5. My
> 5V-to-3.3V interface is simply the junction of a 10K resistor to ground
> and a 3.3K resistor to each of the following LPT port pins:
>
> - LPT pin 9 to RESET (DDS pin 71 controlled by printer port bit 7)
>
> - LPT pin 8 to IOUD (DDS pin 20 controlled by printer port bit 6, R9
> omitted)
>
> - LPT pin 3 to WRB/SC (DDS pin 21 controlled by printer port bit 2)
>
> - LPT pin 2 to A0/SDI (DDS pin 19 controlled by printer port bit 1)
>
> The output low-pass filters are omitted. Instead, a connection is made
> from DDS pin 49 (I output at R4) through a 0.1 uF capacitor to the
> primary of a Mini-Circuits T1-6T transformer. The other end of the
> primary is grounded. The secondary of this transformer feeds a Toko
> America SK107M3N-AO-20 ceramic filter (Digi-Key part # TK2307-ND, 10.7
> MHz center frequency, 180 kHz bandwidth with Zmatch=330 ohms), which in
> turn drives the secondary of another T1-6T transformer to get back down
> to 50 ohms.
>
> The level at the output of the second T1-6T transformer is about -18
> dBm. It is amplified by a Mini-Circuits MAV-11 MMIC
>
(http://www.minicircuits.com/cgi-bin/amplifier?model=MAV-11&pix=bbb123.gif&b
v=4)
> with 0.1 uF coupling capacitors on either side, biased by 12 volts
> through a 120-ohm, 1-watt resistor with a 0.1 uF decoupling capacitor at
> the power-supply feed point. The level after the MAV-11 is
> approximately -8 dBm. The coupling capacitor at the MAV-11's output
> feeds a Mini-Circuits PLP-10.7 low-pass filter

> (http://www.minicircuits.com/dg02-162.pdf), whose purpose is to get rid
> of higher-order harmonics and DDS images that the ceramic filter won't
> attenuate very well.
>
> The output of the PLP-10.7 filter is terminated with a 51-ohm resistor
> to ground. A 0.1 uF coupling capacitor feeds pin 2 of a Linear
> Technologies LT1016 high-speed comparator
> (http://www.linear-tech.com/pdf/1016fc.pdf). This is an 8-pin DIP that
> serves to convert the filtered DDS signal to 5V CMOS-compatible levels.
> Driving the phase detector chip with a rail-to-rail square wave is good
> for 2-3 dB of in-band phase noise improvement, at least with the LMX2326
> chip. (I actually don't know if this is still true of the ADF4112, as I
> didn't try it without the comparator. It seems like a safe bet,
> though. It might be worth using the AD9854's built-in 3.3V comparator
> instead if board space is at a premium.)
>
> Pin 2 of the LT1016, the noninverting signal input, is biased halfway to
> the +5V rail with two 1K resistors in series between power and ground.
> Another 1K resistor is placed between pins 2 and 3 to raise the
> inverting input to the same DC level. Pin 3 has a 0.1 uF bypass to
> ground to keep it from trying to follow the AC component of the input
> signal. Pins 4, 5 and 6 are grounded, with +5V Vcc at pin 1.
>
> The comparator output at pin 8 (~Q) goes directly to pin 8 (REFin) of an
> Analog Devices ADF4112 phase-frequency detector chip. The ADF4112 is a
> 16-pin TSSOP package, available by direct order in small quantities from
> www.analog.com. The connections to this chip are basically as shown in
> the data sheet at
> http://products.analog.com/products/info.asp?product=ADF4112:
>
> - Pin 1 has a 4.7K resistor to ground
> - Pin 2 is the charge pump output to the OP27 op-amp, below
> - Pins 3, 4, and 9 are grounded
> - Pin 5 is bypassed to ground with 100 pF
> - Pin 6 is the input from the VCO, below
> - Pin 7 is the analog supply (+5)
> - Pin 8 is the reference input from the LT1016 as noted above
> - Pins 10 and 15 are tied to the digital +5 supply
> - Pin 11 is connected directly to the LPT port pin 3 (not through the
> 10K/3.3K divider since this is a 5V chip)
> - Pin 12 is connected directly to the LPT port pin 2
> - Pin 13 is connected to LPT port pin 7
> - Pin 14 is connected to LPT port pin 15
> - Pin 16 is the charge-pump supply (+5)
>
> (To use the more commonly-available National LMX2326 PLLatinum chip,
> leave out the resistor at pin 1. This requires changes to the control
> software and loop filter, but I believe the performance will ultimately
> be the same.)
>

> Between the ADF4112 charge-pump output at pin 2 and the VCO is an OP27
> low-noise opamp
> (http://focus.ti.com/docs/prod/folders/print/op27.html). This is an
> 8-pin DIP available from numerous vendors at www.findchips.com (although
> DigiKey seems to be out of stock at the moment).
>
> The OP27 serves to interface the 5V phase-detector chip to the VCO,
> whose tuning line needs about 18V to tune to 2 GHz. The OP27 is powered
> (at pin 7) by a +20V power source, decoupled with a 47 uF capacitor and
> 1 mH RF choke. Like everything else in the circuit, the OP27 needs
> clean power -- its own common-mode supply rejection is not enough.
>
> The OP27's non-inverting input is tied midway between +5 and ground with
> two 10K resistors. There is a 0.1 uF bypass capacitor at their
> junction.
>
> The first and second poles of the loop filter in my circuit consist of
> two 1-uF polyester capacitors in parallel (at least 35 volt rating
> needed here, and the caps should be nonpolarized -- no aluminum
> electrolytics) in series with a parallel combination of a 0.22 uF
> tantalum or metal-film cap (no ceramics!) and 82-ohm resistor. This
> filter goes between pin 2 (inverting input) and pin 6 (output) of the
> OP27.
>
> The loop filter also has a third pole intended to clean up as much of
> the op-amp's own noise as possible. It consists of a 100 ohm resistor
> between pin 6 of the OP27 and the VCO's tuning line. A 0.1 uF tantalum
> (no ceramics) and a 100 pF silver-mica are paralleled between the VCO
> tuning line and ground, as close to the VCO as possible.
>
> Some say that metal-film resistors are 'quieter' than carbon-film types,
> but I never saw any difference in my tests. It might be true for larger
> values. Carbon-composition resistors are supposedly among the noisiest
> of all, so try to steer clear of them in the loop filter.
>
> I would suggest leaving plenty of room and ample connection-pad area for
> the loop filter components, since people like to tweak these. Some
> builders may want to use smaller capacitors for faster locking, for
> instance. Same with the VCO... the ADF4112 is usable with any VCO
> between 100 MHz and 3 GHz, so it would be nice to make it easy for
> people to adapt the board for different VCO modules.
>
> The VCO is a Mini-Circuits ROS-2150VW (data and pinout at
>
http://www.minicircuits.com/cgi-bin/vco?model=ROS-2150VW&pix=ck605.gif&bv=4)
.
> It runs on +5 volts, and its RF output is connected to one leg of a
> Y-network of three 22 ohm resistors. One of the other 22-ohm "legs"
> drives a 51-ohm resistor whose opposite end is grounded. The junction
> of this 22-ohm and 51ohm resistor is coupled through a 0.001 uF

> capacitor to pin 6 of the ADF4112. Obviously these lines need to either
> be very short (millimeters!), or they need to be designed as 50-ohm
> transmission lines, because they carry the 1-2 GHz signal from the VCO.
>
> The final 22-ohm resistor in the splitter network feeds the input pin of
> a Mini-Circuits ERA-5 MMIC
>
(http://www.minicircuits.com/cgi-bin/amplifier?model=ERA-5&pix=vv105.gif&bv=
4)
> through a 0.001 uF coupling capacitor. The ERA-5 is biased with +12V
> through a 100-ohm 1-watt resistor and a Mini-Circuits ADCH-80A broadband
> RF choke (http://www.minicircuits.com/dg02-210.pdf). The RF choke
> should be mounted directly adjacent to the ERA-5, with the resistor
> between it and +12V.
>
> The synthesizer output is coupled from the junction of the ADCH-80A and
> ERA-5 output pin via a 0.001 uF capacitor to an SMA jack. The output
> level is nominally +11 dBm, varying +/- 3dB between 1000 and 2000 MHz.
>
> That's all there is to it, really, except for the +5V power
> distribution. I used a 7805 regulator (again, bolted to the chassis to
> serve as a heat sink) off the +12V bus, which itself came from a 7812.
> The 7812 also feeds the two 3.3-volt LT1086 regulators for the DDS
> subsystem.
>
> The output of a 78xx regulator is very rich in broadband noise, so it
> has to be filtered heavily before being used in a PLL. I used a 1 mH RF
> choke at the 7805 output, feeding a 47 uF bypass capacitor (tantalum or
> aluminum electrolytic). There are five more 1 mH RF chokes connected to
> this node, each with its own 0.1 uF ceramic / 2.2 uF tantalum bypasses
> to the ground plane. Three of these RF chokes feed the ADF4112's
> digital, analog, and phase-detector power-supply pins; the fourth
> supplies the LT1016 comparator at pin 1; and the fifth supplies the VCO.
>
> Make sure the 1 mH chokes above are rated for at least 100 mA of
> current. Total current drain on the +5V line is about 60 mA. The DDS
> subsystem will require about 400 mA at a clock rate of 100 MHz, when
> configured with my software (Q DAC, comparator, and sinc filter turned
> off).
>
> At first, I tried running the "master" 7812 from the same +20V bus that
> feeds the OP27, but it just generated too much heat. So I added a
> second feedthrough cap to my chassis, and ran +15V to the 7812 and +20
> to the OP27 (+24 is fine too, but +18 may not be enough to tune the VCO
> to 2 GHz reliably). The chassis still runs warm (probably ~40-50C), but
> not burning hot like it did with a single +20V supply.
>
> ----------end snip------------
>
> >

> > What kind of vco are you using? You didn't mention this so far.
>
> See above. Usually, good engineering practice in a PLL with this kind
> of coverage calls for two or more high-quality VCOs for reduced tuning
> sensitivity and (consequently) lower phase noise outside the loop
> bandwidth. That's what the R7000 receiver does, which is how they're
> able to pull ahead of me in the wideband phase-noise plot with up to 7
> dB better PN at the all-important 12.5-kHz channel-spacing offset. But
> that would complicate the design substantially, and for my application,
> it just isn't worth the hassle for the difference between -105 and -98
> dBc noise levels.
>
> If you need better noise performance, you would want to start by
> upgrading the $30 Mini-Circuits VCO, either by splitting the coverage
> range across multiple VCOs or by using a quieter, more expensive part
> (like a surplus YIG oscillator). The VCO is definitely the weakest link
> in my design.
>
> After that, a narrower DDS filter (say a +/- 15 kHz-wide crystal filter)
> would bring a further improvement in both SFDR and broadband noise.
>
> Finally, it might be worth looking for a quieter op-amp (or a
> discrete-transistor charge pump amplifier as suggested by Dean Banerjee
> at NSC, something the Icom people used to good effect with a JFET
> current source). Watch out for opamps that seem quiet in the nV/root-Hz
> department but have a high input current spec that will load the phase
> detector, though.
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

825. Help Identify Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 16:54:11 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C5430B3.19E2B1CB@ieee.org>
Source record: 46867

Hello, All,

I have two tubes made by Amperex and wonder what they are and what they are good for.

My guess is that they are either power tubes of some sort or microwave.

They have an unusual shape, with 2 terminals out the top if I remember correctly.

They are numbered 8683 and 7377.

Thanks for any advice.

Clyde
KA1CRV

826. Re: FAR Circuits kaput?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 17:08:51 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <u58d1fepmnfn17@corp.supernews.com>
Source record: 46868

> Haven't been able to access their website all week, left them a
> telephone message but no reply...
> Am I "the last to know" or am I "making a mtn out of a molehill"?

This link worked just now: http://169.207.3.68/~farcir/index.htm#index

827. Re: Books on construction techniques

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 18:20:07 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <0RZ48.38327$Ph2.6397711@news2-win.server.ntlworld.com>
Source record: 46876

> > Have good look on flea markets ,not necessarily related to
> > radio equipment but also related to computers and general electronic
> > 'junk'.
> > I found an old PDP-11 machine in its 19 inch housing and stripped the
> > cabinet.
> > From the elements you can build a custom cabinet for whatever purpose.
> > 19 Inch cabinets are also used for fire alarm systems etc. I am sure
scrap
> > yards
> > are also a potential source for this type of material
>
> There is this problem though if I want things to match. I have 3
table-top
> cabinet shells from:, a marine radiotelephone (Ajax), Hallicrafters HT32
> (nice) and (potentially) Labgear LG50, . Then I have a 19" cabinet 38"
> tall. All completely different!! Reproducability at any time in the
future
> is important to me. Thought about getting a few HT32 cabinets, but not
easy
> I don't think. Especially from within UK. Anyone in UK got any?
========
If you want a custom 19 inch rack type cabinet , find a scrap cabinet
(taller than the one you want)
of the modular variety.
Take it to bits and trim the components to the size you want ,both height
and depth.

Example :The cabinet for the old PDP-11 I have is too high for the operating
desk I wish to put it under (on castor wheels) , hence I'll cut the 4
vertical supports (with recess and holes to fit (a) 19 inch panel(s)) and
the cabinet sides /top and bottom will be cut to size in a sheet - metal
workshop, resulting in a taylor made enclosure !
Even without an old 19 inch rack type of cabinet ,you can construct a
taylor-made cabinet by using heavy duty angle steel used for storage racks
etc.

Frank gm0csz.kn6wh@ntlworld.com

828. Re: SCHEMATIC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 18:24:29 UTC
From: Branko Ribi&#65533;i&#65533; <branko.ribicic@zg.hinet.hr>
Message-ID: <a31gt9$e8m1$1@as201.hinet.hr>
Source record: 46869

Thanks dear Bill! Schematic is very close.
Regards, Branko

.Your Friend Bill <none@coqui.net> wrote in message
news:3C4ECB34.2F191639@coqui.net...
> "Branko Ribi&#65533;i&#65533;" wrote:
> >
> > I am looking for a schematic for a XCR-30, Mk.2 radio. Made in the
Republic
> > of South Africa by Barlows Television Company. Very nice and rare
concept.
> > 73, Branko (9a2dl)
> >
> > branko.ribicic@zg.hinet.hr
>
>
> Here's an XCR-30, not Mark 2
> http://www.sci.fi/~ijl/xcr30sch.gif
>

829. Re: FAR Circuits kaput?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 18:35:26 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C54486E.8C1A9FBA@ieee.org>
Source record: 46870

The link that came up in a Google search did not work....

http://www.cl.ais.net/farcir/

Clyde

"Bob Lewis (AA4PB)" wrote:

> > Haven't been able to access their website all week, left them a
> > telephone message but no reply...
> > Am I "the last to know" or am I "making a mtn out of a molehill"?
>
> This link worked just now: http://169.207.3.68/~farcir/index.htm#index

830. Re: Help Identify Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 18:56:29 UTC
From: ac6v <ac6v@amsat.org>
Message-ID: <3C544D5C.BA457451@amsat.org>
Source record: 46871

Clyde see URL:
http://www.tubecollector.org/8683.htm

I recall working on Navy UHF transmitters using this tube.

For the 7377 -- see URL:
http://www.wps.com/archives/tube-datasheets/Indices/7377.html
This is the detailed description for the 7377
Parent Page is at URL:
http://www.wps.com/archives/tube-datasheets/

There u will find tons of tube data

Much More at AC6V.com (My Pages) -- URL:
http://ac6v.com/antique.htm#VT

Keep those glow bugs glowing

--
73 From AC6V, Rod In Oceanside, CA
I doubt, therefore I might be!

AC6V Mega Ham Index at http://ac6v.com
AC6V Book For DXers at http://ac6v.com/DXSAMPLE.htm
==========

"Clyde R. Shappee" wrote:

> Hello, All,
>
> I have two tubes made by Amperex and wonder what they are and what they
> are good for.
>
> My guess is that they are either power tubes of some sort or microwave.
>
> They have an unusual shape, with 2 terminals out the top if I remember
> correctly.
>
> They are numbered 8683 and 7377.
>
> Thanks for any advice.
>
> Clyde
> KA1CRV

831. Fireworks and 3-500Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 19:22:14 UTC
From: "Al Lorona, Jr." <al_lorona@agilent.com>
Message-ID: <3C545365.55186441@agilent.com>
Source record: 46887

Hi, Everybody,

An Eimac 3-500Z with a total of fifty hours of service on it was recently powered up in an amplifier which had been packed away for three-and-a-half years. Surprisingly, arcing inside between the anode and ground repeatedly shut down the plate supply.

I let the filament cook for 48 hours (with the plate supply disconnected from the tube). Reasoning that gas was causing the arcing, this was a desperate attempt to activate the getter and get rid of the impurities. The tube got to the point where it could support the plate voltage, but as soon as drive was applied the tube arc'ed and shut down the high voltage again.

Am I hosed, or is there something else I can try?

Thank you,

Al W6LX

832. Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 19:40:30 UTC
From: Robert Offer <robert@g1zjp.freeserve.co.uk>
Message-ID: <a31l3iutc1@news6.svr.pol.co.uk>
Source record: 46872

Hi all,
I have just purchased an ex-military EHT supply with a model ... No.50 on it. It looks to have a choke input, a fairly large transformer and a couple of brown "potted" type of rectifier blocks.
Does anybody have any kind of information on the supply or any idea of the output of the transformer? There do not seem to be any markings on any of the kit. Same with the paper capacitors (2of) in what was described as the "low power/voltage bit".
Any help much appreciated
Thanks in advance
Bob
G1ZJP

833. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 20:41:36 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C5466D3.52EA@pop.removethistomailme.net>
Source record: 46873
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Kijoma wrote:
>
> Why use the ad9854 agn?, would the 9852 do the job?

The 9852 would be fine, too. The 9854 is just what I had in the junk box. It is pin-compatible with the 9852, so either chip would be OK to use. I don't know if the pricing is any different.

>
> and for 100MHz clock the 9850/1?

Have a look at the narrowband SFDR plots on their respective data sheets. Remember that the "grass" within a few kHz of the carrier will be amplified by as much as 40-50 dB (20*log(total N)) by the PLL. The 9852/9854 have 12-bit DACs with 17-bit internal phase accumulators, so they're theoretically 6 dB cleaner than the cheaper 10-bit parts... but from the spectral plots in the data sheets, the differences in overall noise/spur content look even more dramatic. PLLs like clean references!

As usual, for most applications the extra noise may not be a big deal, but I'd rather spend a few more bucks and be satisfied that I've used the best part for the job. I guess that's why I don't do this for a living. :-)

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

834. Re: Where ? ARRL Radio Designer software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 20:42:58 UTC
From: rexa*non*spam*@dnai.com
Message-ID: <pcp85uk833r68bso2sln2a2thk9ids61to@4ax.com>
Source record: 46874

On Sun, 27 Jan 2002 11:05:23 -0000, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>Mike , If you download a prog. called 'Go!Zilla' you will be able to
>continue downloading any prog. or file at a future log-on session. Go!Zilla
>just arranges for the downloading to continue where it stopped at a previous
>session.
>
>Good Luck
>
>Frank gm0csz.kn6wh@ntlworld.com

Last I checked, The Go!Zilla package contained spyware which it
installed on your system. I got it off my machine after I found
this. It also never successfully fixed a broken download for me.

Here's a link to software that scans your machine for spyware:
www.lavasoftUSA.com (Ad-aware)

-Rex, KK6MK

835. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 20:50:10 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C5468D5.C0B@pop.removethistomailme.net>
Source record: 46875
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

```
Mike Monett wrote:
>
> John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3C536F55.23C8@pop.removethistomailme.net>...
> > Mike Monett wrote:
> > >
> > > Don't blame you at all. How about a simple square block just showing
> > > the inputs and outputs?
> >
> > Well, here's the circuit description that I sent to Richard (with a few
> > corrections I've already passed on to him) and additional notes in
> > parentheses. This is the basis for the schematic and board layout he's
> > working on.
>
> [...snip good description]
>
> > If you need better noise performance, you would want to start by
> > upgrading the $30 Mini-Circuits VCO, either by splitting the coverage
> > range across multiple VCOs or by using a quieter, more expensive part
> > (like a surplus YIG oscillator). The VCO is definitely the weakest link
> > in my design.
> >
> > After that, a narrower DDS filter (say a +/- 15 kHz-wide crystal filter)
> > would bring a further improvement in both SFDR and broadband noise.
> >
> > Finally, it might be worth looking for a quieter op-amp (or a
> > discrete-transistor charge pump amplifier as suggested by Dean Banerjee
> > at NSC, something the Icom people used to good effect with a JFET
> > current source). Watch out for opamps that seem quiet in the nV/root-Hz
> > department but have a high input current spec that will load the phase
> > detector, though.
> >
> > -- jm
> >
> > ----------------------------------------------------
> > http://www.qsl.net/ke5fx
> > Note: My E-mail address has been altered to avoid spam
> > ----------------------------------------------------
>
> Hi Jim,
>
> Thanks for the excellent info. You have a thoroughly professional
> design, and I am anxiously waiting for the schematics and more info.
```

> In the meantime, I collected some information that may be of interest
> if you haven't come across it already. Here's a copy-paste from my
> notes:
>
> On reducing regulator noise, Wenzel has some comments on "Finesse
> Voltage Regulator Noise" at
>
> http://www.wenzel.com/documents/finesse.html
>

Now that is a neat hack! It's a shame they don't build 3-terminal
regulators with that technique built onto the die, where it (seemingly)
would belong.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

836. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 21:55:08 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C54780F.1E70@pop.removethistomailme.net>
Source record: 46877
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Rex Allers wrote:
>
> John,
>
> Very interesting design with current nify chips.
>
> So on the ADF4112, you dead-bugged the TSSOP package for your
> prototype? (I assume that means glue the chip with legs up and
> solder wires to it.)

Exactly. You can barely see the 4112 just above the leftmost of the two bright yellow polyester caps. The chip is held down by its three grounded pins, no glue necessary.

> No wonder you don't want to do that again. Just
> curious what gage wire you were soldering to the chip. I would
> think even 30 ga would be big to solder to a TSSOP package.

I used 30-gauge Kynar wire-wrap wire.

The trick seems to be to bend alternating pins on the chip in opposite directions to give yourself some room. You get to do this once, maybe twice, before the pin suffers too much fatigue and goes all floppy on you, so it pays to start by bending the ground pins down towards the board. :)

Tin both the chip lead and the wire, and then -- remembering to clean the soldering iron tip before every connection -- lay the wire end atop the chip pin and heat it with the iron until you think the solder coatings might have melted together. You can verify the connection to some extent by wiggling the wire at the point where it lies atop the pin with a very fine pair of tweezers. After that, you don't want to move the wire around any more than necessary.

You want to keep plenty of fine-grade solder wick on hand, of course.

> Was the 1-watt a typo? Seems excessive for a MMIC, but with 12 V
> feed maybe you need at least 1/2 watt.

The MAV-11 draws about 60 mA at 5.5 volts. (12-5.5)/.06 is 110 ohms, rounded up to 120. .06*.06*120 is a little less than 1/2 watt, rounded up to 1 watt for safety. Actually the prototype uses a 330-ohm and 180-ohm parallel combo, the former being visible just to the right of the two dark yellow T1-6T transformers below the DDS chip.

The other power-hungry MMIC is the ERA-5 that follows the VCO. Interestingly, now that you made me go back and check :), it looks like Mini-Circuits has derated the ERA-5's current spec since I printed my copy of their data sheet a few years ago. They are now calling for 65 mA at 4.9 volts typical, while my old data sheet says 80 mA at 5.0 volts. So my 100-ohm bias resistor on the ERA-5 is not as conservative as I thought.

It may be a good idea to use the same 120-ohm 1W resistor on the ERA-5 as on the MAV-11, although I'm not about to dig back into my own unit and change it. The ERA-5's maximum rating is high enough (120 mA on both data sheets) that I'm not too worried about the difference between 65 and 80 mA.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

837. How to connect lights etc. to clockwork Freeplay generator?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 22:43:52 UTC
From: williehearst@aol.com
Message-ID: <bba37f0e.0201271443.f57e0b9@posting.google.com>
Source record: 46879

My son has got himself involved with a school science project in which he decided that he would prove that a Bayliss FreePlay generator could power low voltage lightbulbs, buzzers etc.as well as the radio. Unfortunately, neither of us has any useful knowledge of electronics and cannot make the lights etc. function when simply connected to the generator output terminals. Can any one help with this problem using real simple instructions? I would be very grateful for info.Thanx. WH

838. Re: FAR Circuits kaput?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-27 23:32:38 UTC
From: nx7u@mindspring.com
Message-ID: <3c548dea.32349596@nntp.mindspring.com>
Source record: 46878

OK, so looks like maybe a DNS lookup hasn't propagated thru the net
yet.
Thanks for the new route!

On Sun, 27 Jan 2002 12:08:51 -0500, "Bob Lewis \(AA4PB\)"
<rlewis@staffnet.com> wrote:

>> Haven't been able to access their website all week, left them a
>> telephone message but no reply...
>> Am I "the last to know" or am I "making a mtn out of a molehill"?
>
>This link worked just now: http://169.207.3.68/~farcir/index.htm#index
>
>
>

839. South Georgia - VP8GEO now QRV

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 01:48:11 UTC
From: Charles Johnston <ctj92@cableone.net>
Message-ID: <3c54add9$1@news.bnb-lp.com>
Source record: 46880
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

VP8GEO (South Georgia Island) came up on 20m CW around 00:02 UTC
28-Jan-2002

QSL via VE3GCO

VE3GCO
THE MAPLE LEAF RADIO SOCIETY
5 MCLAREN AVENUE
LISTOWEL, ON N4W 3K1
CANADA
--

73 / DX

Charles T Johnston
Prescott, Arizona - U.S.A.
charles@ab7sl.com

AB7SL - Ham Radio Pages
Official W9INN Antennas Page
www.ab7sl.com

840. Re: Has anyone else heard/done this ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 03:36:29 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c54c5a0.600903944@news.erols.com>
Source record: 46881

< lots of snip >

So is everything OK ??

Don't want to be on the ng's shit-list. You've all been helpful
in the past. BTW, to those who asked,.... The answer to what
I plan to do is this:

1. Buy the 9913
2. Look for a better amp until,...
3. I get the skills to build the ass-kickin'
Rock-Crusher of my dreams with my own
two hands. Maybe later this year or next.

73 de KG4JBM

Reticulum

Remove "your.hat" when replying via e-mail

841. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 04:48:09 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0201272048.18142486@posting.google.com>
Source record: 46882
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3C5468D5.C0B@pop.removethistomailme.net>...

[... snip my stuff]

> > On reducing regulator noise, Wenzel has some comments on "Finesse
> > Voltage Regulator Noise" at
> >
> > http://www.wenzel.com/documents/finesse.html
> >
>
> Now that is a neat hack! It's a shame they don't build 3-terminal
> regulators with that technique built onto the die, where it (seemingly)
> would belong.
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

Wenzel comes up with some great stuff! But few people are interested
in low-noise supplies.

Here are some updates on low-noise regulators that I didn't include
since I could not verify the urls.

I once saw an article that showed the output impedance of the 78XX
regulator has a small inductive component. I can't find the article,
but I seem to remember than a 10uF tantalum on the output caused a
resonance. This increased the output noise significantly between 1
KHz and 100KHz.

The solution was to use higher or lower values of capacitance to
avoid resonance. I'm still looking for the app note.

The 7805 is spec'd at 40uV of noise between 10Hz and 100KHz, where
the venerable 723 produces 2.5uV between 100Hz and 10KHz with a 5uF
bypass at the CREF pin.

A Synergy Microwave article uses a 723 driving a PNP pass transistor
to reduce the output noise. The article has been upgraded to Acrobat
4, which I cannot read using Win 3.11. Hopefully, the regulator is
still shown in Fig. 5. It looks quite nice, since it drives a 22uF
output cap from the collector of the pass transistor.

http://www.synergymwave.com/products/synthesizers/synthesizerpdf/SynthesizerTutorial.pdf

Here's another low-noise regulator that drops the noise to 3nV/Hz at 1KHz:

http://archives.e-insite.net/archives/ednmag/reg/1997/010297/01di_03.htm

Also, Bob Perrin points out the LTZlOOO voltage reference has a phenomenal temperature stability of 0.05 ppm/C. It has an on-chip heater resistor and temperature sensor (base-emitter junction). It might be worth looking into for a stable reference for critical applications.

Regards,

Mike Monett

842. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL- ERA-5 Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 05:09:00 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <a32mq2$90u$1@slb4.atl.mindspring.net>
Source record: 46883
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John, I've been given to understand the ERA-5 has had some heat problems with the power spec'd and the physical package the part uses.

We switched to the GAL-5 which has equivalent performance, but a much better construction for getting the heat out of the device.

Mini-Circuits recommends the GAL for any new designs, and you may want to alter the design for this part. It's physically different, but in terms of cost and performance, it was pretty much a drop in replacement with better reliability.

Actually, I think the GAL was a fraction cheaper cost...

Jim Pennell

843. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 06:24:43 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C54EF7F.2463@pop.removethistomailme.net>
Source record: 46884
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett wrote:
>
> Wenzel comes up with some great stuff! But few people are interested
> in low-noise supplies.
>
> Here are some updates on low-noise regulators that I didn't include
> since I could not verify the urls.

I'll add those links to my collection (Win 3.11?! Wow, that's stoicism for ya!) I would like to find a quieter regulator solution for this type of circuit at some point. Seemingly the RF chokes are taking care of any power-supply noise problems in the present design, as I don't see an improvement when running the +5V line from a separate, known-quiet supply, or when temporarily bridging a 1000 uF cap across it.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

844. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL- ERA-5 Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 06:42:58 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C54F3C5.2FD0@pop.removethistomailme.net>
Source record: 46885
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Jim Pennell wrote:
>
> John, I've been given to understand the ERA-5 has had some heat problems
> with the power spec'd and the physical package the part uses.
>
> We switched to the GAL-5 which has equivalent performance, but a much
> better construction for getting the heat out of the device.
>
> Mini-Circuits recommends the GAL for any new designs, and you may want to
> alter the design for this part. It's physically different, but in terms of
> cost and performance, it was pretty much a drop in replacement with better
> reliability.
>
> Actually, I think the GAL was a fraction cheaper cost...
>
> Jim Pennell

Good to know, Jim, thanks! I'll have a look at the new part. The ERA-5
certainly does run hot when you bias it to 80 mA. Hopefully we're OK
using a larger bias resistor.

For some reason, when I type GAL-5 into the minicircuits.com search
page, I get a popup Javascript box that says "Please try GALI-5."
GALI-5 brings up the specs on the part you're talking about (I assume),
but it's not listed in their catalog pages.

Pretty typical, just as I restock my parts bin with 20 ERA-5s...!

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

845. Re: 30.000 links

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 07:19:37 UTC
From: odrzavanjepc1 <odrzavanjepc1@ddsv.hr>
Message-ID: <a32uf1pe1@garrison.globalnet.hr>
Source record: 46886

dsadsads
Willi Passmann <DJ6JZ@compuserve.de> wrote in message
news:a2st5a$p5h$02$3@news.t-online.com...
> Hi folks,
>
> I would like to announce that the radio-portal database now contains
> more than 30,000 hobby related URLs. During the last two weeks I
> concentrated on collecting URLs for manuals, modifications and reviews,
> as this kind of information is of special interest for many of us.
>
> radio-portal is a search engine especially for radio amateurs and short
> wave listeners; it was awarded by Radio Netherlands with the Milleneum
> Innovation Award in the year 2000.
>
> If you should not find information on a specific model, try a search
> using the manufacturer's name, and limit the search to the category of
> interest (like "Modifications", "Manuals and Schematics", "Reviews"...)
>
> vy 73,
> Willi Passmann, DJ6JZ
> www.radio-portal.org
>
>

846. Re: 30.000 links

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 07:28:32 UTC
From: Stjepan Gelemanovic <odrzavanjepc1@ddsv.hr>
Message-ID: <a32uvp$u7$1@garrison.globalnet.hr>
Source record: 46888

4444
odrzavanjepc1 <odrzavanjepc1@ddsv.hr> wrote in message
news:a32uf1pe1@garrison.globalnet.hr...
> dsadsads
> Willi Passmann <DJ6JZ@compuserve.de> wrote in message
> news:a2st5a$p5h$02$3@news.t-online.com...
> > Hi folks,
> >
> > I would like to announce that the radio-portal database now contains
> > more than 30,000 hobby related URLs. During the last two weeks I
> > concentrated on collecting URLs for manuals, modifications and reviews,
> > as this kind of information is of special interest for many of us.
> >
> > radio-portal is a search engine especially for radio amateurs and short
> > wave listeners; it was awarded by Radio Netherlands with the Milleneum
> > Innovation Award in the year 2000.
> >
> > If you should not find information on a specific model, try a search
> > using the manufacturer's name, and limit the search to the category of
> > interest (like "Modifications", "Manuals and Schematics", "Reviews"...)
> >
> > vy 73,
> > Willi Passmann, DJ6JZ
> > www.radio-portal.org
> >
> >
>
>

847. Homebrew ultrawideband

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 08:30:10 UTC
From: David Findlay <david_j_findlay@yahoo.com.au>
Message-ID: <pan.2002.01.28.18.30.09.744206.1939@yahoo.com.au>
Source record: 46889

Anyone doing anything with homebrew ultrawideband radio? Thanks,

David

848. Re: Homebrew ultrawideband

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 09:47:14 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C551EF5.3D6F@pop.removethistomailme.net>
Source record: 46890

David Findlay wrote:
>
> Anyone doing anything with homebrew ultrawideband radio? Thanks,
>
> David

I'd like to get my feet wet in UWB, but I'm not sure where to start, to be honest. The two "secrets" seem to be the pulse-position modulator (which has to generate subnanosecond-wide Gaussian monocyles spaced at irregular intervals plus optional small offsets in time for each individual pulse) at the transmitter side, and the temporal correlator ("Fullerton correlator," whatever) at the receiver end.

What I've never been able to wrap my mind around is how the initial link negotiation happens. When you have no idea (a) when a pulse is going to arrive; and (b) where it fits in the PRN temporal spreading sequence, how in the world do you "receive" it?

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

849. Wanted LT2S Transverter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 10:00:46 UTC
From: iw1arb <iw1arb@hotmail.com>
Message-ID: <a337g6$qc4$1@serv1.iunet.it>
Source record: 46892

[No readable article body recovered]

850. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 10:22:04 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0201280222.1c149f18@posting.google.com>
Source record: 46891
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3C54EF7F.2463@pop.removethistomailme.net>...
> Mike Monett wrote:
> >
> > Wenzel comes up with some great stuff! But few people are interested
> > in low-noise supplies.
> >
> > Here are some updates on low-noise regulators that I didn't include
> > since I could not verify the urls.
>
>
> I'll add those links to my collection (Win 3.11?! Wow, that's stoicism
> for ya!) I would like to find a quieter regulator solution for this
> type of circuit at some point. Seemingly the RF chokes are taking care
> of any power-supply noise problems in the present design, as I don't see
> an improvement when running the +5V line from a separate, known-quiet
> supply, or when temporarily bridging a 1000 uF cap across it.
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

Yes, Win 3.11. No worries about viruses or trojans, since they won't
run. In fact, the virus checking programs won't run either, so I save
a lot of time not having to keep up with the latest versions :)

Windows loads in less than 4 seconds on a K6-450 MHz, so I get back
online faster after it crashes. And I don't have to reformat my hard
disk and reinstall it every three months :)

BTW, the LTZ1000 voltage reference is vast overkill for a
synthesizer, since the loop has to lock regardless of temperature
drift in the varicaps. The spec took a while to find, since ENGINEER
Bob misspelled it.The data sheet is at

http://www.linear.com/prod/datasheet.html?datasheet=141

Sounds like regulator noise is not a problem in your current design,
but wait till you get your hands on a cheap surplus YIG!

Regards,

Mike Monett
mrmonett@yahoo.com

851. Re: Where ? ARRL Radio Designer software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 11:01:06 UTC
From: Henry Gernhardt/Andrea Winship <hcg_NOSPAM_alw@earthlink.net>
Message-ID: <3C552F07.10AD336B@earthlink.net>
Source record: 46893

Mike, Rex:

> >Mike , If you download a prog. called 'Go!Zilla' you will be able to
> >continue downloading any prog. or file at a future log-on session.

> Last I checked, The Go!Zilla package contained spyware which it
> installed on your system.

Spyware? What exactly is that?

In any case, I had no problems resuming a broken download using Netscape Navigator 4.75.

Good luck,

Henry C. Gernhardt, III

Remove _NOSPAM to reply direct

852. Re: How to connect lights etc. to clockwork Freeplay generator?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 11:11:17 UTC
From: Kc7eip <kc7eip_nospam@shaw.ca>
Message-ID: <Xns91A4206EDD30Ekc7eipshawca@24.64.223.211>
Source record: 46749

williehearst@aol.com (Willy) wrote in
news:bba37f0e.0201271443.f57e0b9@posting.google.com:

> My son has got himself involved with a school science project in which
> he decided that he would prove that a Bayliss
> FreePlay generator could power low voltage lightbulbs, buzzers etc.as
> well as the radio. Unfortunately, neither of us has any
> useful knowledge of electronics and cannot make the lights etc.
> function when simply connected to the generator output
> terminals. Can any one help with this problem using real simple
> instructions? I would be very grateful for info.Thanx. WH
>

Well the first thing i would do is test the voltage cooming off of the generator... you can do this with any common digital voltmeter. This should give you an idea of what you have to work with... (You may not have much i'm sure alot of the internals of the radio are passive and that the generator may be used to powere the audio amp only...) Once you know your voltage try and find a lamp that will run on that voltage... You may be stuck running a low power led vice conventianl lamp.

853. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 14:04:52 UTC
From: Win Hill <whill@mediaone.net>
Message-ID: <3C555913.3D414218@mediaone.net>
Source record: 46894
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett wrote:
>
> I once saw an article that showed the output impedance of the 78XX
> regulator has a small inductive component. I can't find the article,
> but I seem to remember than a 10uF tantalum on the output caused a
> resonance. This increased the output noise significantly between
> 1 kHz and 100KHz.
>
> The solution was to use higher or lower values of capacitance to
> avoid resonance. I'm still looking for the app note.
>
> The 7805 is spec'd at 40uV of noise between 10Hz and 100KHz, where
> the venerable 723 produces 2.5uV between 100Hz and 10KHz with a 5uF
> bypass at the CREF pin.

All regulators appear to have inductive output impedances, just as
do all opamps in closed loops. This is because the regulator's
moderately-high intrinsic open-loop output impedance is reduced to
a respectably-low impedance by the regulator's negative feedback.
But this negative feedback necessarily decreases with increasing
frequency, so the output impedance rises with increasing frequency,
which is the characteristic of an inductor.

The NSC 7805 data sheet shows this effect in a graph on page 8,
where Zo is 8 milliohms up to 1kHz, and starts rising 6dB/octave
with an apparent inductance of L = 0.023 / 2pi 10kHz = 0.37uH.

This would resonate with a 10uF output capacitor at 83kHz, but
at 83kHz 0.37uH has a resonanct impedance of only 0.19 ohms, and
a 10uF aluminum capacitor is likely to have a higher esr than 0.2
ohms, so there's really no Q in this "resonance." A 1000uF low-esr
electrolytic like a 10V Panasonic FC type (0.065 ohms) resonates at
9kHz with Q = 2pi 8.3kHz 0.37uH / 0.065 = 0.3, illustrating how hard
it is to show any real resonance effect in most regulators. In this
way the "high" esr of the output electrolytic plays an important role
in closed-loop stability.

Thanks, /.-.\
((( ))
- Win \\\//
\\\
Winfield Hill //\\\

Rowland Institute for Science /// \\\
Cambridge, MA \/ \/

854. Tubes for sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 15:04:56 UTC
From: w4th@hotmail.com
Message-ID: <dc97c428.0201280704.37961b04@posting.google.com>
Source record: 46895

I have new factory fresh 3-500zg tubes for sale. These tubes are
fully tested before they are shipped. I stand behind every tube i
sell. If you would like to see some references about my tubes and
service, just go to my web site http://www.tomstubes.com
and look for the reference section near the bottom of the page.
My 3-500zg tubes are really great. I have sold dozens of these, and I
have never had to replace a single tube! As I said, each tube is fully
tested and that is the only time the tubes have been removed from
their factory shipping boxes.
The price of my 3-500zg tubes is $110.00 plus shipping. I will
warranty each tube for 6 months.....no ouestions asked....If you are
not completely satisfied with any tube you buy from me, send it back
for an exchange or refund....your choice.....no hassle.
I also have 4cx800a tubes new in the box for $190.00 per PAIR!
Thanks for your time and 73.
Tom.......W4TH

855. Re: Spread Spectrum Homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 15:29:28 UTC
From: mikea@mikea.ath.cx
Message-ID: <s7e58.24755$OR6.2318774495@newssvr17.news.prodigy.com>
Source record: 46896

Jim Pennell <NoSpam@killspam.com> wrote:
: Seems to me the FCC limited spread spectrum ham experiments to 440 and
: above. I think they also specifed the allowable PN sequence codes but I
: am not sure as to that part.

: One thing is, they want to be able to listen in and so I can pretty much
: guarantee that they will limit the choices for what hams can use for spread
: spectrum stuff.

I also remember the PN sequences being limited. IIRC, the FCC
specified SR length and tap positions, and the sequences are
short enough that they _will_ be able to sync up.

--
Mike Andrews
mikea@mikea.ath.cx
Tired old sysadmin since 1964

856. TS50 SW-RX/TX antenna tuner interface protocol wanted!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 16:13:49 UTC
From: Markus Wolfgart <markus.wolfgart@dlr.de>
Message-ID: <3C5578BD.E49E9EF6@dlr.de>
Source record: 46797
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew

Hi ngr's, hi om's and (x)yl's,

I'm looking for the specification of the antenna tuner interface
of the Kenwood TS50 amateur-radio transceiver.
The tuner terminal connector consist of five pins:

antenna-tuner-connector (front view)

```
+---+---+---+
| 1 | 2 | 3 |
+---+---+---+
| | 5 | 6 |
+---+---+---+
```

When the transceiver is switched off but connected to power supply
(+13,4V) the pins have
the measured voltage values:

Pin 1: +0,6V
Pin 2: 0V
Pin 3: 0V
Pin 5: 0V
Pin 6: +13,4V

When the transceiver is switched on (RX-Mode) the pins are in the
following condition:

Pin 1: +0V
Pin 2: +5V <-- this voltage (+5V) could be tied down by a 1 kOhm
resistor to 0,8V
Pin 3: +0V and by a 500 Ohm resistor to 0,4V.
Pin 5: +0V
Pin 6: +13,4V

During the power-on period, some dynamic condition appear on pin 1 and
2:

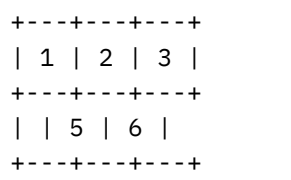
Pin 1: goes up to +5V for 1.2 sec and then down to +0V for ever until
switching the transceiver off, independent of pressing the
antenna tuner push button at the front panel.

Pin 2: goes up to +0V for 150ms and then up to +5V for the rest of the
time.

I want to get the frequency/band info and hope this information is
reported
to the tuner-interface.

Have you any hints for me, concerning this tuner interface.

PS: in the service-manual kennwood call the pins:
TT and TS, seems to be bidirectional and connected via biderectional
drivers
to the M37702M4A 16-bit CPU (i/o port P8)



Pin 1: GND (digital ground ?)
Pin 2: TT ?
Pin 3: ATG (antenna/analog ground ?)
Pin 4: TS ?
Pin 5: 14S (power supply)

Many thanks in advance

Markus Wolfgart

DL8MBY

857. Re: Spread Spectrum Homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 16:38:54 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <9gva5uk7fqhps7n7tkdjrmosc5svq9qr8q@4ax.com>
Source record: 46798

On Thu, 24 Jan 2002 17:37:19 -0800, "Jim Pennell"
<NoSpam@killspam.com> wrote:

> Seems to me the FCC limited spread spectrum ham experiments to 440 and
>above. I think they also specifed the allowable PN sequence codes but I
>am not sure as to that part.

Read my post closely: We were working under a Special Temporary
Authorization from the FCC.

> One thing is, they want to be able to listen in and so I can pretty much
>guarantee that they will limit the choices for what hams can use for spread
>spectrum stuff.

What good is sending a signal that nobody can copy? Yes, we actually
used one of the FCC's recommended Sequencies because we were not
interested in playing with sequency as much as just getting the damned
thing to work first.

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

858. Re: Where ? ARRL Radio Designer software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 17:14:48 UTC
From: rcnixon@mindspring.com
Message-ID: <3c558605.2627763@news.mindspring.com>
Source record: 46799

Henry Gernhardt/Andrea Winship <hcg_NOSPAM_alw@earthlink.net> wrote:

>Mike, Rex:
>
>> >Mike , If you download a prog. called 'Go!Zilla' you will be able to
>> >continue downloading any prog. or file at a future log-on session.
>
>> Last I checked, The Go!Zilla package contained spyware which it
>> installed on your system.
>
>Spyware? What exactly is that?
>
>In any case, I had no problems resuming a broken download using Netscape
>Navigator 4.75.
>
>Good luck,
>
> Henry C. Gernhardt, III
>
>Remove _NOSPAM to reply direct
Spyware is the generic term for software that is often installed on
your computer via Java scripts. It reports back to the sponsors
information about your browsing and buying habits. It can also have
more nefarious uses, such as recording keystrokes and reporting them
back to whomever launched the program. This is useful for stealing
passwords and etc. It is the ultimate "black-bag" job because it
doesn't even require physical penetration. Use a firewall, get a good
anti-virus package and use ad-aware to detect and delete spyware.

Russ

859. Re: What parameters yield highest toroid Q

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 17:19:55 UTC
From: Mr G H Ireland <igor@argonet.co.uk>
Message-ID: <na.3802a14b00.a70320igor@argonet.co.uk>
Source record: 46810

In article <3c4e669c$0$37099$ac966d11@news.raex.com>, "BFHawkins"
<not@aol.com> wrote:
> Ok, I know this is a very broad question, but I'm curious what
> > combinations people have used.

See also "QRP Power", Zack Lau, KH6CP, pp.2-20 to 2-26. Lots of example
toroids discussed.

73 de G3CCL

--

```
__ __ __ __ __ ___ ___________________________________________
|__||__)/ __/ \|\ ||_ | /
| || \\__/\__/| \||__ | /...Internet access for all Acorn RISC machines
____________________________/ igor@argonet.co.uk
```

860. TS930S Tx problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 17:22:58 UTC
From: Jungwoo Lee x5362 <jungwoo@lucent.com>
Message-ID: <3C5588F2.7F050EB9@lucent.com>
Source record: 46800
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Hi Group!

I would like to ask a question about my TS930S problem.
It has a terrible audio report (heavy distortion) from QSOs. The problem occurs on all bands
(form 80 to 10m) Initially I thought
it has a RF feedback problem, but I noticed that the previous owner already added the
modification (ferrite bead into the mic circuit, and also a modification in the external
speaker jack) according to the Kenwood service bulletin.
I am beginning to suspect that there may be some other problem (may be final amp stage?).

By the way, when I monitor my Tx signal (by turning on the monitor switch), the tone quality
seems to be OK. So I suspect that there may be a problem after the IF stage
because the monitor function demodulates the IF output signal. I wonder
whether you have any tips about where and how to fix this.
Your help will be greatly appreciated.
Thanks.

-AB2ND, Jungwoo Lee

861. Re: RCA UHF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 18:04:13 UTC
From: Skipp <skipp@pilotNOSPAMPLEASE.ucdavis.edu>
Message-ID: <a343qtpm1@woodrow.ucdavis.edu>
Source record: 46801

Hi Gus,

You have a classic Series 700 radio which is actually a pretty nice unit. RCA had the 1000, 700 and 500 series of the same family. Your radio will do full duplex and that means you can turn it into a nice repeater or duplex link radio. The hard part is buying the crystals, I use Bomar most of the time now (for cost reasons), but ICM also can set you up.

I still have a few RCA repeaters and the mobile radios in Ham/Amateur service. They just wont die... so why replace a good unit.

The best place to find manuals for old RCA gear are the Ham Swaps... Although some Mags claim to have old Service Manual Dealers, none have ever been able to supply me with anything that old, of which I have inquired.

So all my books came from flea markets and surplus two-way radio dealers.

You can compare the 700 to a GE MVP, but the 700 is/was a trunk mount unit. Motorola's equiv at the time was a Mocom 70 or similar.

Just call Bomar and give them them the model and frequency information you have. Most of the Crystal Companies have been dealing with two-way radio so long, they already have the information for each radio channel element in their files.

The manual is the hard part... If you get in a pinch, you can Email me and I'll try to provide additional information. I do know a few places you can still inquire for RCA books.

Cheers

Skipp
skipp@pilotNOSPAMPLEASE.ucdavis.edu

take the NOSPAMPLEASE out of my Email header to reply.

862. I should understand this !

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 19:04:38 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c5599da.12152303@news.freeserve.net>
Source record: 46803

Hi Folks, its Theory time :-(

Assume I have a two plate air spaced capacitor, dielectric = 1.
I then place a thin sheet of dielectric = 2, of the same area as the plates in the airgap, but not displacing much of the air (eg gap = 5" and the sheet = .1").
Will this increase the dialectric to 2 and therefore increase the capacitance ?

And secondly, does the calculation in the ARRL Handbook for calculating capacitance of two parallel plates (ARRL 1990 2-14)hold good if the plates are concentric tubes ?

A silly question, but its got me confused :-(

863. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 20:15:34 UTC
From: John Larkin <jjlarkin@highlandSNIP_THIStechnology.com>
Message-ID: <OLBVPFLksSIRb3FoJ+UaE1CzoPS7@4ax.com>
Source record: 46804
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Mon, 28 Jan 2002 14:04:52 GMT, Win Hill <whill@mediaone.net> wrote:

>Mike Monett wrote:
>>
>> I once saw an article that showed the output impedance of the 78XX
>> regulator has a small inductive component. I can't find the article,
>> but I seem to remember than a 10uF tantalum on the output caused a
>> resonance. This increased the output noise significantly between
>> 1 kHz and 100KHz.
>>
>> The solution was to use higher or lower values of capacitance to
>> avoid resonance. I'm still looking for the app note.
>>
>> The 7805 is spec'd at 40uV of noise between 10Hz and 100KHz, where
>> the venerable 723 produces 2.5uV between 100Hz and 10KHz with a 5uF
>> bypass at the CREF pin.
>
> All regulators appear to have inductive output impedances, just as
> do all opamps in closed loops. This is because the regulator's
> moderately-high intrinsic open-loop output impedance is reduced to
> a respectably-low impedance by the regulator's negative feedback.
> But this negative feedback necessarily decreases with increasing
> frequency, so the output impedance rises with increasing frequency,
> which is the characteristic of an inductor.
>
> The NSC 7805 data sheet shows this effect in a graph on page 8,
> where Zo is 8 milliohms up to 1kHz, and starts rising 6dB/octave
> with an apparent inductance of L = 0.023 / 2pi 10kHz = 0.37uH.
>
> This would resonate with a 10uF output capacitor at 83kHz, but
> at 83kHz 0.37uH has a resonanct impedance of only 0.19 ohms, and
> a 10uF aluminum capacitor is likely to have a higher esr than 0.2
> ohms, so there's really no Q in this "resonance." A 1000uF low-esr
> electrolytic like a 10V Panasonic FC type (0.065 ohms) resonates at
> 9kHz with Q = 2pi 8.3kHz 0.37uH / 0.065 = 0.3, illustrating how hard
> it is to show any real resonance effect in most regulators. In this
> way the "high" esr of the output electrolytic plays an important role
> in closed-loop stability.
>
> ___
> Thanks, /.-.\
> ((( ))

> - Win \\\//
> \\\
> Winfield Hill //\\\
> Rowland Institute for Science /// \\\
> Cambridge, MA \/ \/

Win,

The negative regulators - 79xx, LM337 - will oscillate if
insufficiently bypassed. I've bypassed them with just a few hundred nF
of ceramics, and that didn't work... nice sawtooth oscillators.

John

864. Re: I should understand this !

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 20:23:02 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <3C55B326.BB4D327D@dialpoint.net>
Source record: 46805

If I understand the question there is still a lot of air space between the plates. YOu will have to take into account the ammount of air plus the ammount of the thin sheet. As the air gap is much greater than the sheet, the dialectric constant will not be much over 1. You have to take into account the total material between the plates.

For the second part, you use the area of the outside of the inside pipe for the area of both plates.

Mike W wrote:
>
> Hi Folks, its Theory time :-(
>
> Assume I have a two plate air spaced capacitor, dielectric = 1.
> I then place a thin sheet of dielectric = 2, of the same area as the
> plates in the airgap, but not displacing much of the air (eg gap =
> 5" and the sheet = .1").
> Will this increase the dialectric to 2 and therefore increase the
> capacitance ?
>
> And secondly, does the calculation in the ARRL Handbook for
> calculating capacitance of two parallel plates (ARRL 1990 2-14)hold
> good if the plates are concentric tubes ?
>
> A silly question, but its got me confused :-(

865. Re: TS930S Tx problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 20:57:49 UTC
From: Frank Krozel <frank@electronicinstrument.com>
Message-ID: <a346sctth1@slb6.atl.mindspring.net>
Source record: 46802
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Check the bias on the finals es drivers.
frank
KG9H
"Jungwoo Lee x5362" <jungwoo@lucent.com> wrote in message
news:3C5588F2.7F050EB9@lucent.com...
> Hi Group!
>
> I would like to ask a question about my TS930S problem.
> It has a terrible audio report (heavy distortion) from QSOs. The problem
occurs
> on all bands
> (form 80 to 10m) Initially I thought
> it has a RF feedback problem, but I noticed that the previous owner
already
> added the
> modification (ferrite bead into the mic circuit, and also a modification
in the
> external
> speaker jack) according to the Kenwood service bulletin.
> I am beginning to suspect that there may be some other problem (may be
final amp
> stage?).
>
> By the way, when I monitor my Tx signal (by turning on the monitor
switch), the
> tone quality
> seems to be OK. So I suspect that there may be a problem after the IF
stage
> because the monitor function demodulates the IF output signal. I wonder
> whether you have any tips about where and how to fix this.
> Your help will be greatly appreciated.
> Thanks.
>
> -AB2ND, Jungwoo Lee

866. FS: Vintage Sig Gen

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 21:12:12 UTC
From: Walter Treftz <penguino@atlantic.net>
Message-ID: <3C55BEAB.C6F9AF2@atlantic.net>
Source record: 46806

SELL: Ferris Instrument Co signal generator. Vintage age. Appears to be the granddaddy of the Boonton gear as also manufactured in Boonton, NJ and looks exactly like their product style of the 1930-40's

Model: 18-D, freq range: 8 - 210 mhz, 0-1.2v RF output.

Excellent condx, has all tubes, unmodified, original AC cord, atten. pad & cable. Guess to be from the 1930's.

Best reasonable offer. Buyer pays shipping and any "out-of-pocket" packing expenses (no extra charge for packing - if we can find a suitable box - and taking to shipping point of your choice (postal or UPS).

Walter Treftz
3840 Laguna Loop
Hernando, FL 34442
(352) 637-1755
penguino@atlantic.net

867. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 21:13:56 UTC
From: Spehro Pefhany <speff@interlog.com>
Message-ID: <oaj58.4248$liz.2129@news2.bloor.is>
Source record: 46807
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

In sci.electronics.design John Larkin <jjlarkin@highlandsnip_thistechnology.com> wrote:

> The negative regulators - 79xx, LM337 - will oscillate if
> insufficiently bypassed. I've bypassed them with just a few hundred nF
> of ceramics, and that didn't work... nice sawtooth oscillators.

Clearly marked in the data sheets too. ;-) It's probably up there with assuming the pinout is the same as the 78xx far as common mistakes go.

Why is it that the neg regulators (and LDO regulators, in general) need output bypassing to be stable, while 78xx are stable with no bypassing on the output?

Best regards,
--
Spehro Pefhany --"it's the network..." "The Journey is the reward"
speff@interlog.com Info for manufacturers: http://www.trexon.com
Embedded software/hardware/analog Info for designers: http://www.speff.com

868. Re: I should understand this !

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 21:24:44 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c55c10d.22188907@news.freeserve.net>
Source record: 46808

On Mon, 28 Jan 2002 15:23:02 -0500, Ralph Mowery
<rmowery@dialpoint.net> wrote:

>
>For the second part, you use the area of the outside of the inside pipe
>for the area of both plates.
>
thanks

869. Surplus components for auction - clearing out the shack.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 22:12:03 UTC
From: Martin John Hallsworth <Martin@NOSPAMg1gyc.demon.co.uk>
Message-ID: <1012260322.3518.1.nnrp-07.9e98acde@news.demon.co.uk>
Source record: 46812
Cross-posted to: misc.industry.electronics.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.repair,uk.radio.amateur

Please take time to have a look at the following auctions.
I am having a good clear out.

700Mfd 400v computer grade electrolytic capacitors - 10 off
http://page.auctions.shopping.yahoo.com/uk/auction/60800958

600uf 300v electrolytics - 2 off (as 1 lot)
http://page.auctions.shopping.yahoo.com/uk/auction/60800488

250v 1000 Mfd electrolytic capacitors - 6 off (as 1 lot)
http://page.auctions.shopping.yahoo.com/uk/auction/60750728

5Mfd 660v Block paper capacitors - 21 off
http://page.auctions.shopping.yahoo.com/uk/auction/60777476

17.5Mfd 330v Block paper capacitors - 21 off
http://page.auctions.shopping.yahoo.com/uk/auction/60752574

19" project cabinet
http://page.auctions.shopping.yahoo.com/uk/auction/59589735

19" unit ABS Project Box
http://page.auctions.shopping.yahoo.com/uk/auction/59589934

Plastic Project Box
http://page.auctions.shopping.yahoo.com/uk/auction/59589280

New unused 4CX250BM valves
http://page.auctions.shopping.yahoo.com/uk/auction/60738324

Thanks
~~~~~~
REMOVE NO SPAM to reply Thanks
Martin@NOSPAMg1gyc.demon.co.uk

~~~~~~
Help fight mailbots with these in your tagline:
tosspam@aol.com abuse@aol.com abuse@yahoo.com
abuse@hotmail.com abuse@msn.com abuse@sprintmail.com
abuse@earthlink.net abuse@bigfoot.com abuse@demon.net
abuse@Excite.com abuse@hotmail.com abuse@Lycos.com
abuse@totalserve.co.uk abuse@ukonline.net
abuse@zoom.co.uk abuse@fs.net.uk abuse@freeserve.co.uk
abuse@info.cep.cniba-u.ac.jp uce@ftc.gov

~~~~~~
~~~~~~

870. Re: Fireworks and 3-500Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 22:12:16 UTC
From: la8ak.xnd@online.no
Message-ID: <3c55c9e6.112284280@news.online.no>
Source record: 46809

On Sun, 27 Jan 2002 11:22:14 -0800, "Al Lorona, Jr."
<al_lorona@agilent.com> wrote:

>
>Hi, Everybody,
>
>An Eimac 3-500Z with a total of fifty hours of service on it was
>recently powered up in an amplifier which had been packed away for
>three-and-a-half years. Surprisingly, arcing inside between the anode
>and ground repeatedly shut down the plate supply.
>
>I let the filament cook for 48 hours (with the plate supply disconnected
>from the tube). Reasoning that gas was causing the arcing, this was a
>desperate attempt to activate the getter and get rid of the impurities.
>The tube got to the point where it could support the plate voltage, but
>as soon as drive was applied the tube arc'ed and shut down the high
>voltage again.
>
>Am I hosed, or is there something else I can try?
>
>Thank you,
>
>Al W6LX

you read all the instructions for applying old transmitting tubes on
http://ham.te.hik.se/homepage/sm5bsz/

--
remove ,xnd to reply

871. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 23:10:53 UTC
From: Winfield Hill <hill@rowland.org>
Message-ID: <3C55DA7D.E4CF2B6D@rowland.org>
Source record: 46811
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Spehro Pefhany wrote:
>
> John Larkin <jjlarkin@highlandsnip_thistechnology.com> wrote:
>
>> The negative regulators - 79xx, LM337 - will oscillate if
>> insufficiently bypassed. I've bypassed them with just a few hundred
>> nF of ceramics, and that didn't work... nice sawtooth oscillators.
>
> Clearly marked in the data sheets too. ;-) It's probably up there with
> assuming the pinout is the same as the 78xx far as common mistakes go.
>
> Why is it that the neg regulators (and LDO regulators, in general) need
> output bypassing to be stable, while 78xx are stable with no bypassing
> on the output?

That's easy to understand. Ordinary regulators have the equivalent
of emitter-follower or source follower outputs, with a stage gain
of near unity more or less independent of load. There's only a
moderate phase lag associated with the output capacitor.

In sharp contrast, LDO and negative regulator output stages are like
common-emitter amplifiers, with the output capacitance acting as the
load. This means the stage gain is rather high (especially high for
low load conditions) and falls with frequency, due to the output load
capacitor's falling reactance. Furthermore there's a large phase lag
associated with the output capacitor, in fact the feedback circuit can
be thought of as type of brute-force compensated amplifier. So we see
the output capacitor is a critical element in the loop's compensation,
which is not the case for ordinary 78xx type regulators.

Thanks,
- Win

Winfield Hill
Rowland Institute for Science
100 Edwin Land Blvd
Cambridge, MA 02142

872. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 23:44:02 UTC
From: Spehro Pefhany <speff@interlog.com>
Message-ID: <6nl58.6781$bIE.2849@news1.bloor.is>
Source record: 46813
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

In sci.electronics.design Winfield Hill <hill@rowland.org> wrote:

> That's easy to understand. Ordinary regulators have the equivalent
> of emitter-follower or source follower outputs, with a stage gain
> of near unity more or less independent of load. There's only a
> moderate phase lag associated with the output capacitor.

> In sharp contrast, LDO and negative regulator output stages are like
> common-emitter amplifiers, with the output capacitance acting as the
> load. This means the stage gain is rather high (especially high for
> low load conditions) and falls with frequency, due to the output load
> capacitor's falling reactance. Furthermore there's a large phase lag
> associated with the output capacitor, in fact the feedback circuit can
> be thought of as type of brute-force compensated amplifier. So we see
> the output capacitor is a critical element in the loop's compensation,
> which is not the case for ordinary 78xx type regulators.

Thanks, that makes perfect sense. I note that the LM2940 is much noisier
than the 78M05, 150uV typical (Co = 22uF) vs. 40uV typical (Co = 0.1uF).

Best regards,
--
Spehro Pefhany --"it's the network..." "The Journey is the reward"
speff@interlog.com Info for manufacturers: http://www.trexon.com
Embedded software/hardware/analog Info for designers: http://www.speff.com

873. Re: I should understand this !

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-28 23:53:10 UTC
From: Henry Gernhardt/Andrea Winship <hcg_NOSPAM_alw@earthlink.net>
Message-ID: <3C55E3F7.67EE6162@earthlink.net>
Source record: 46814

Mike---

> Assume I have a two plate air spaced capacitor, dielectric = 1.
> I then place a thin sheet of dielectric = 2, of the same area as the
> plates in the airgap, but not displacing much of the air (eg gap =
> 5" and the sheet = .1").
> Will this increase the dialectric to 2 and therefore increase the
> capacitance ?

It _WILL_ increase the capacitance, however it will NOT increase it to 2.

Starting with your original air-dielectric capacitor with k=1, and distance between the plates d=5.00cm (units changed to mesh with SI), we then add a dielectric film of 0.10cm with k=2. For the sake of simplicity, we say the dielectric is placed directly against one of the plates.

What we now have can equivalently be described as two parallel plate capacitors connected in series: Capacitor C_1, being defined with k=2 and d=0.10cm, and capacitor C_2, being defined with k=1 and d=4.90cm. This is permissible because there is _NO_DIFFERENCE_IN_POTENTIAL_ between the virtual plates ending C_1 and beginning C_2.

```
|X | |X| | |
|X | |X| | |
-|X |- becomes -|X|---| |-
|X | |X| | |
|X | |X| | |
C_1 C_2
X: k=2 dielectric
```

Now it's time for the formulas [C=(k*e_0*A)/d]
C_1=(2*e_0*A)/(0.10cm)
C_2=(e_0*A)/(4.90cm)

Combining the capacitors in series, we get:

```
1 0.10cm 4.90cm
- = ------- + ------
C 2*e_0*A e_0*A
```

Which solves down to

```
e_0*A
C = ------
4.95cm
```

We know that the capacitance of the above equivalent _MUST_ have the same capacitance as the original, unlike-dielectric capacitor. Since C=(k*e_0*A)/d, and the original d=5.00cm, we can deduce the following relationship:

$$\frac{e_0 * A}{4.95\text{cm}} = \frac{k * e_0 * A}{5.00\text{cm}}$$

Which, when solved for k, gives us an effective dielectric constant of 1.01.

Sorry for the diatribe, but I remembered the question from my freshman physics. Hope it helps!

874. IC207 Software Functions

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-29 00:48:44 UTC
From: "Rex Klopfenstein, Jr." <rklopfen@wcnet.org>
Message-ID: <3C55F16C.38D37F9A@wcnet.org>
Source record: 46815

Does anybody know if there is a document on the Web that lists the
various commands and their format used to get/put information to the
Icom IC-207 transceiver?

Thanks

--
Rex Klopfenstein, Jr.
Bowling Green, OH
KC8PFP
rklopfen@wcnet.org
http://www.wcnet.org/~rklopfen

875. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-29 01:07:29 UTC
From: DrGrok@mungednet.com
Message-ID: <a34sfghb1@bob.news.rcn.net>
Source record: 46816

In article <7e4a2a11.0201272048.18142486@posting.google.com>, mrmonett@yahoo.com (Mike Monett) wrote:
>John Miles <jmiles@pop.removethistomailme.net> wrote in message
> news:<3C5468D5.C0B@pop.removethistomailme.net>...
>
>[... snip my stuff]
>
>> > On reducing regulator noise, Wenzel has some comments on "Finesse
>> > Voltage Regulator Noise" at
>> >
>> > http://www.wenzel.com/documents/finesse.html
>> >
>>
>> Now that is a neat hack! It's a shame they don't build 3-terminal
>> regulators with that technique built onto the die, where it (seemingly)
>> would belong.
>>
>> -- jm
>>
>> --
>> http://www.qsl.net/ke5fx
>> Note: My E-mail address has been altered to avoid spam
>> --
>
> Wenzel comes up with some great stuff! But few people are interested
> in low-noise supplies.
>
> Here are some updates on low-noise regulators that I didn't include
> since I could not verify the urls.
>
> I once saw an article that showed the output impedance of the 78XX
> regulator has a small inductive component. I can't find the article,
> but I seem to remember than a 10uF tantalum on the output caused a
> resonance. This increased the output noise significantly between 1
> KHz and 100KHz.
>
> The solution was to use higher or lower values of capacitance to
> avoid resonance. I'm still looking for the app note.
>
> The 7805 is spec'd at 40uV of noise between 10Hz and 100KHz, where
> the venerable 723 produces 2.5uV between 100Hz and 10KHz with a 5uF
> bypass at the CREF pin.
>
> A Synergy Microwave article uses a 723 driving a PNP pass transistor

> to reduce the output noise. The article has been upgraded to Acrobat
> 4, which I cannot read using Win 3.11. Hopefully, the regulator is
> still shown in Fig. 5. It looks quite nice, since it drives a 22uF
> output cap from the collector of the pass transistor.
>
>

> http://www.synergymwave.com/products/synthesizers/synthesizerpdf/SynthesizerTu
>torial.pdf

The 723 is definately the way to go for the best low noise regulators. Bypass
the internal reference before connecting it back to the difference amplifier.
Use these at work for state of the art low noise oscillators.

Dr. G.

> Here's another low-noise regulator that drops the noise to 3nV/Hz at
> 1KHz:
>
> http://archives.e-insite.net/archives/ednmag/reg/1997/010297/01di_03.htm
>
> Also, Bob Perrin points out the LTZlOOO voltage reference has a
> phenomenal temperature stability of 0.05 ppm/C. It has an on-chip
> heater resistor and temperature sensor (base-emitter junction). It
> might be worth looking into for a stable reference for critical
> applications.
>
> Regards,
>
> Mike Monett

876. Re: Spread Spectrum Homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-29 01:47:08 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <a34uvc$2bq$1@slb2.atl.mindspring.net>
Source record: 46817

----- Original Message -----
"Jake Brodsky" <frussle@erols.com> Wrote:

>
> Read my post closely: We were working under a
> Special Temporary Authorization from the FCC.
>

Actually, Jake, I had noticed that... My post wasn't meant to be about your project, but rather general info for hams who are just starting to read about spread spectrum in ham radio.

The FCC grants a number of STA for experimental purposes, but those privledges are for the specific people it has been issued to. The general public still has to comply with the rules.

==========

By the way, I did a little tinkering with direct sequence at a company I worked for and we found locking up to the signal transmitted to be complicated. Especially if there was any real difference in the frequency of the reference oscillators. For that and other reasons, we decided to make ffrequency hoppers instead.

This was in the ISM bands and quite a few years ago now. We did make a commercial product out of it, but data latency was a problem. I sometimes think we xhould have chased DSS methods after all. Oh well...

Jim Pennell

877. Re: Homebrew ultrawideband

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-29 02:07:35 UTC
From: "Carl R. Stevenson" <wa6vse-shack@fast.net>
Message-ID: <3c560408_2@news7.fast.net>
Source record: 46818

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message
news:3C551EF5.3D6F@pop.removethistomailme.net...
> David Findlay wrote:
> >
> > Anyone doing anything with homebrew ultrawideband radio? Thanks,
> >
> > David
>
> I'd like to get my feet wet in UWB, but I'm not sure where to start, to
> be honest. The two "secrets" seem to be the pulse-position modulator
> (which has to generate subnanosecond-wide Gaussian monocyles spaced at
> irregular intervals plus optional small offsets in time for each
> individual pulse) at the transmitter side, and the temporal correlator
> ("Fullerton correlator," whatever) at the receiver end.

While it's not LEGAL yet (and surely "never" will be for hams ...
though the FCC has an NPRM out on rules for unlicensed,
Part 15 like use), UWB is interesting ... I've been studying
it a bit on the professional level.

The PPM version seems vastly inferior to the technical approach
taken by XtremeSpectrum, who use a PN-coded series of biphase
wavelets ... this offers a MUCH lower peak-average ratio than the
PPM version proposed by TimeDomain ... and appears to be a
MUCH better choice, both in terms of coexistence and suitability
for (short range) communications applications ...

Check out Xtreme's website for more info ... don't have the URL
handy on this machine, but any search engine should find it for
you easily.

73,
Carl - wa6vse

878. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-29 04:55:34 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0201282055.2090f775@posting.google.com>
Source record: 46819
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Win Hill <whill@mediaone.net> wrote in message news:<3C555913.3D414218@mediaone.net>...

[...snip my stuff]

> All regulators appear to have inductive output impedances, just as
> do all opamps in closed loops. This is because the regulator's
> moderately-high intrinsic open-loop output impedance is reduced to
> a respectably-low impedance by the regulator's negative feedback.
> But this negative feedback necessarily decreases with increasing
> frequency, so the output impedance rises with increasing frequency,
> which is the characteristic of an inductor.
>
> The NSC 7805 data sheet shows this effect in a graph on page 8,
> where Zo is 8 milliohms up to 1kHz, and starts rising 6dB/octave
> with an apparent inductance of L = 0.023 / 2pi 10kHz = 0.37uH.
>
> This would resonate with a 10uF output capacitor at 83kHz, but
> at 83kHz 0.37uH has a resonanct impedance of only 0.19 ohms, and
> a 10uF aluminum capacitor is likely to have a higher esr than 0.2
> ohms, so there's really no Q in this "resonance." A 1000uF low-esr
> electrolytic like a 10V Panasonic FC type (0.065 ohms) resonates at
> 9kHz with Q = 2pi 8.3kHz 0.37uH / 0.065 = 0.3, illustrating how hard
> it is to show any real resonance effect in most regulators. In this
> way the "high" esr of the output electrolytic plays an important role
> in closed-loop stability.
>
> ___
> Thanks, /.-.\
> ((( ))
> - Win \\\//
> \\\
> Winfield Hill //\\\
> Rowland Institute for Science /// \\\
> Cambridge, MA \/ \/

Hi Win,

Thanks for your explanation. It is not clear from reading the data sheet that the output impedance is inductive, or why ESR plays such an important role.

NatSem has a new app note that might be of interest. It explains the Bode plot of conventional and LDO regulators, and discusses ESR in

some detail. It's at

http://www.national.com/an/AN/AN-1148.pdf

Your explanation is good, and may explain why the rms noise increases when tantalums are used at the output.

The article I am searching for actually measured the noise using different types of capacitors.

I suspect it was EDN, and got over 400 hits. Going through them one-by-one is taking a long time :)

Regards,

Mike Monett

879. an R-1155 available.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-29 13:23:07 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c56a1d9.1800078@news.freeserve.net>
Source record: 46820

HI, Just seen an R-1155 in an auction and under the Auctioneers hammer tonight.
It appears to be complete, original, unmodified. It seems to have been stored in a dusty loft for 40+ years, it's covered in dust but the knobs are all there (I think they are original but not certain), the DF switches etc. also present and intact, the case appears to be aluminium but not sure on this, there are no mods I can see.

Whats it worth?

If you want it I'll be happy to bid on your behalf, e-mail me with your top bid.

No commision and delivery at cost.

The Hammer falls at about 19:00 GMT tonight so I'll be reading any replies to this message no later than 18:15 GMT.

atb Mike W, G8NXD qthr

880. An Ambitious Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-29 13:55:08 UTC
From: SideBand <ab8lr@csotbs.org>
Message-ID: <3C56A9BC.9090308@csotbs.org>
Source record: 46821

Hello OM's...

I've recently decided it's time to build an amplifier for HF. I'm not a rich man, so I'm looking to do this as low cost as I can. I'm also very unfamiliar with the territory I'm thinking of venturing into now.

I've decided to start with a couple of burnt out microwaves for the power supplies. I figure the transformers in them should be enough to run a semi-large single tube, or two smaller tubes.

I've also (almost) settled on the Svetlana 4cx800A, or two Svetlana 4cs400A's.

The problem here is that I'm in VERY unfamiliar territory. Does anyone know any sources, online or otherwise, where I can get sample schematics for a simple one or two tube amp? How about a source for the calculations necessary to make this project sing without alot of distortion or by-products, and to prolong the life of the tube(s)?

I'm not looking for full legal limit here... 600 watts would be more than enough, and 1200 would be dreamy in my particular situation.

Thanks in advance for your time and consideration.

--
73 de AB8LR, Chris

http://csotbs.shopiwon.com/ for great deals on computer products.

881. Re: An Ambitious Project (HF HomeBrew Amp)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-29 14:50:56 UTC
From: ac6v <ac6v@amsat.org>
Message-ID: <3C56B6CF.CA66B84C@amsat.org>
Source record: 46822

Maybe look at the ARRL Handbook and also some Amp Links at URL:
http://ac6v.com/techref.htm#AMP
--
73 From AC6V, Rod In Oceanside, CA
I doubt, therefore I might be!

AC6V Mega Ham Index at http://ac6v.com
AC6V Book For DXers at http://ac6v.com/DXSAMPLE.htm
==========
SideBand wrote:

> Hello OM's...
>
> I've recently decided it's time to build an amplifier for HF. I'm not a
> rich man, so I'm looking to do this as low cost as I can. I'm also very
> unfamiliar with the territory I'm thinking of venturing into now.
>
> I've decided to start with a couple of burnt out microwaves for the power
> supplies. I figure the transformers in them should be enough to run a
> semi-large single tube, or two smaller tubes.
>
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>
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> any sources, online or otherwise, where I can get sample schematics for a
> simple one or two tube amp? How about a source for the calculations
> necessary to make this project sing without alot of distortion or
> by-products, and to prolong the life of the tube(s)?
>
> I'm not looking for full legal limit here... 600 watts would be more than
> enough, and 1200 would be dreamy in my particular situation.
>
> Thanks in advance for your time and consideration.
>
> --
> 73 de AB8LR, Chris
>
> http://csotbs.shopiwon.com/ for great deals on computer products.

882. power amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-29 15:01:52 UTC
From: Xu <salers@hamal.freemail.ne.jp>
Message-ID: <a36dcv$6n4$1@mail.cn99.com>
Source record: 46823

Hi!Guys!
Which one have experience/schematic in without ferriete toroid wide band (2-20MHz) RF amplifier in 2-10W range? I decide to built one ,but I can not find the schematic diagram.can I use the small inductor with colour circuit in collector of transistor as RFC,or I must make it use ferriete toroid /iron power core?
Thanks in advance.
73!de BD2RH Xu

883. Re: Spread Spectrum Homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-29 15:45:21 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <9hgd5uog2iheneo1o8p8ed4j29grivipes@4ax.com>
Source record: 46824

On Mon, 28 Jan 2002 17:47:08 -0800, "Jim Pennell"
<NoSpam@killspam.com> wrote:

> The FCC grants a number of STA for experimental purposes, but those
>privledges are for the specific people it has been issued to. The general
>public still has to comply with the rules.

And following that project, I did post comments to the FCC about the use of Spread spectrum experiments on ham radio bands relating to just what you mention. Unfortunately, the ARRL carried much more weight on this issue. I would have liked to see the sequency options opened up to all walsh codes below a certain length for a given rate. That way, it ought to be possible to lock up on an unknown signal within some given time.

> By the way, I did a little tinkering with direct sequence at a company I
>worked for and we found locking up to the signal transmitted to be
>complicated. Especially if there was any real difference in the frequency
>of the reference oscillators. For that and other reasons, we decided to
>make ffrequency hoppers instead.

We got around that problem by deriving our chip rate from the center frequency itself. Thus, if you locked on one, you'd be locked on the other.

> This was in the ISM bands and quite a few years ago now. We did make a
>commercial product out of it, but data latency was a problem. I sometimes
>think we xhould have chased DSS methods after all. Oh well...

Some day, we'll get back in to it. I know a guy with a screen room where we can fool with this stuff as much as we want. When we get something working, we'll probably apply for an STA...

73,

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

884. P.C. Boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-29 15:57:19 UTC
From: Bobby Smith <ke5os@calpha.com>
Message-ID: <kdhd5ugm1r1ika58s98ios3i2oci09l70u@4ax.com>
Source record: 46825

There used to be a fella that made printed circuit boards for all of the QST projects and some of the 73 and projects and I have not been able to locate him lately. If he is still around I would sure appreciate help finding him.

Thanks,

Bobby

885. Re: P.C. Boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-29 16:00:45 UTC
From: troglodite@aol.com
Message-ID: <20020129110045.11202.00000068@mb-cg.aol.com>
Source record: 46826

>
>There used to be a fella that made printed circuit boards for all of
>the QST projects and some of the 73 and projects and I have not been
>able to locate him lately. If he is still around I would sure
>appreciate help finding him.
>

I think you are talking about Far Circuits. Their web address is
www.cl.ais.net/farcir/

Doug Moore KB9TMY

886. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-29 16:07:48 UTC
From: "Paul M. Jaeger" <n7pj@ieee.org>
Message-ID: <3F9FF53841E8375C.0D21516982B36950.F30247300DCFCED6@lp.airnews.net>
Source record: 46827
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Hi Mike,

There was a note published in Electronic Design long ago, which
now appears as Appendix C in Bob Pease "Troubleshooting Analog
Circuits": Understanding and Reducing Noise Voltage on 3-Terminal
Regulators" by Errol H. Dietz. Has a plot of noise spectra with an
assortment of different bypass caps on an LM317.

PJ

Mike Monett wrote:
>
> Win Hill <whill@mediaone.net> wrote in message news:<3C555913.3D414218@mediaone.net>...
>
> [...snip my stuff]
>
> > All regulators appear to have inductive output impedances, just as
> > do all opamps in closed loops. This is because the regulator's
> > moderately-high intrinsic open-loop output impedance is reduced to
> > a respectably-low impedance by the regulator's negative feedback.
> > But this negative feedback necessarily decreases with increasing
> > frequency, so the output impedance rises with increasing frequency,
> > which is the characteristic of an inductor.
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> > The NSC 7805 data sheet shows this effect in a graph on page 8,
> > where Zo is 8 milliohms up to 1kHz, and starts rising 6dB/octave
> > with an apparent inductance of L = 0.023 / 2pi 10kHz = 0.37uH.
> >
> > This would resonate with a 10uF output capacitor at 83kHz, but
> > at 83kHz 0.37uH has a resonanct impedance of only 0.19 ohms, and
> > a 10uF aluminum capacitor is likely to have a higher esr than 0.2
> > ohms, so there's really no Q in this "resonance." A 1000uF low-esr
> > electrolytic like a 10V Panasonic FC type (0.065 ohms) resonates at
> > 9kHz with Q = 2pi 8.3kHz 0.37uH / 0.065 = 0.3, illustrating how hard
> > it is to show any real resonance effect in most regulators. In this
> > way the "high" esr of the output electrolytic plays an important role
> > in closed-loop stability.
> >
> > ___
> > Thanks, /.-.\
> > ((( ))
> > - Win \\\//
> > \\\

> > Winfield Hill //\\\
> > Rowland Institute for Science /// \\\
> > Cambridge, MA \/ \/
>
> Hi Win,
>
> Thanks for your explanation. It is not clear from reading the data
> sheet that the output impedance is inductive, or why ESR plays such
> an important role.
>
> NatSem has a new app note that might be of interest. It explains the
> Bode plot of conventional and LDO regulators, and discusses ESR in
> some detail. It's at
>
> http://www.national.com/an/AN/AN-1148.pdf
>
> Your explanation is good, and may explain why the rms noise
> increases when tantalums are used at the output.
>
> The article I am searching for actually measured the noise using
> different types of capacitors.
>
> I suspect it was EDN, and got over 400 hits. Going through them
> one-by-one is taking a long time :)
>
> Regards,
>
> Mike Monett

887. Re: Spread Spectrum Homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-29 16:30:41 UTC
From: mikea@mikea.ath.cx
Message-ID: <R6A58.16525$z_4.2339930184@newssvr16.news.prodigy.com>
Source record: 46828

Jake Brodsky <frussle@erols.com> wrote:

: We got around that problem by deriving our chip rate from the center
: frequency itself. Thus, if you locked on one, you'd be locked on the
: other.

You can't do that! It makes too much sense!

: Some day, we'll get back in to it. I know a guy with a screen room
: where we can fool with this stuff as much as we want. When we get
: something working, we'll probably apply for an STA...

<Drooooooool>

And you live _where_?

--
Mike Andrews ex-WN5EGO, a long, long time ago
mikea@mikea.ath.cx
Tired old sysadmin since 1964

888. Re: P.C. Boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-29 17:31:07 UTC
From: Glenn Pederson <gpeder@elnet.com>
Message-ID: <u5dn38qenfrbd9@corp.supernews.com>
Source record: 46829

Try this link for FAR Circuits:

http://www.cl.ais.net/~farcir/

"Bobby Smith" <ke5os@calpha.com> wrote in message
news:kdhd5ugm1r1ika58s98ios3i2oci09l70u@4ax.com...
> There used to be a fella that made printed circuit boards for all of
> the QST projects and some of the 73 and projects and I have not been
> able to locate him lately. If he is still around I would sure
> appreciate help finding him.
>
> Thanks,
>
>
> Bobby

889. WTB: Triad M-15 Modulation transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-29 18:00:38 UTC
From: Chuck O'Neal <coneal@ultranet.com>
Message-ID: <a36o34$j9p$1@bob.news.rcn.net>
Source record: 46830
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Anyone have one for sale? A good $$$ reward paid!!! or
trade for other components
Thanks!
Chuck...

890. Re: Spread Spectrum Homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-29 21:27:22 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <1c4e5u8125n02t6t04oeu290m822r2gdf1@4ax.com>
Source record: 46831

On Tue, 29 Jan 2002 16:30:41 GMT, mikea@mikea.ath.cx (Mike Andrews)
wrote:

>Jake Brodsky <frussle@erols.com> wrote:
>
>: We got around that problem by deriving our chip rate from the center
>: frequency itself. Thus, if you locked on one, you'd be locked on the
>: other.
>
>You can't do that! It makes too much sense!

Hey, we were serious about getting this to work. The idea was to see
if we could try a little NBFM on the one VCO we were using to generate
our DSSS carrier. We would recover the signal and watch our VCO
steering line for the modulation...

>: Some day, we'll get back in to it. I know a guy with a screen room
>: where we can fool with this stuff as much as we want. When we get
>: something working, we'll probably apply for an STA...

We had notions of building an orthogonal sequency transponder. I have
doubts as to how much process gain we could get and how much immunity
we could achieve from the repeater's orthogonal code, but we thought
it might be fun to try...

In any case, if you look up my call sign you'll see I live in central
Maryland, between Baltimore and Frederick.

73,

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

891. Re: Spread Spectrum Homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-29 22:01:45 UTC
From: mikea@mikea.ath.cx
Message-ID: <dZE58.16675$HW3.2367760547@newssvr16.news.prodigy.com>
Source record: 46832

Jake Brodsky <frussle@erols.com> wrote:
: On Tue, 29 Jan 2002 16:30:41 GMT, mikea@mikea.ath.cx (Mike Andrews)
: wrote:

:>Jake Brodsky <frussle@erols.com> wrote:
:>
:>: We got around that problem by deriving our chip rate from the center
:>: frequency itself. Thus, if you locked on one, you'd be locked on the
:>: other.
:>
:>You can't do that! It makes too much sense!

: Hey, we were serious about getting this to work. The idea was to see
: if we could try a little NBFM on the one VCO we were using to generate
: our DSSS carrier. We would recover the signal and watch our VCO
: steering line for the modulation...

:>: Some day, we'll get back in to it. I know a guy with a screen room
:>: where we can fool with this stuff as much as we want. When we get
:>: something working, we'll probably apply for an STA...

: We had notions of building an orthogonal sequency transponder. I have
: doubts as to how much process gain we could get and how much immunity
: we could achieve from the repeater's orthogonal code, but we thought
: it might be fun to try...

Well, Gold Codes appear to be the fad-of-the-moment _and_ very
useful for fast acquisition and lock-up. My knowledge, at this
time, is pretty much limited to what I can pull out of Dixon and
what I can pull off the 'Net, and to my military experience

When I get more Copious Free Time, I may want to play.

--
There are two product lines in which customers are called "users".
The other one is illegal drugs.
MWMeyer, viva voce personal communication

892. Re: P.C. Boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-29 22:06:02 UTC
From: Rich Griffiths <richg@one.net>
Message-ID: <3C571CCA.B0E79077@one.net>
Source record: 46833

Apparently www.cl.ais.net/farcir/ is defunct (see other thread on FAR Circuits), but you can find them at

http://169.207.3.68/~farcir/index.htm#index

I've bought several boards from FAR. Lots of variety. Good quality.

... Rich

Troglodite wrote:
>
> >
> >There used to be a fella that made printed circuit boards for all of
> >the QST projects and some of the 73 and projects and I have not been
> >able to locate him lately. If he is still around I would sure
> >appreciate help finding him.
> >
>
> I think you are talking about Far Circuits. Their web address is
> www.cl.ais.net/farcir/
>
> Doug Moore KB9TMY

893. PSK/ICOM IC-751 Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-29 22:13:27 UTC
From: Al Cristaldi <megaman@cybernet1.com>
Message-ID: <a376q90nsq@enews3.newsguy.com>
Source record: 46834

Seeking help with wiring of my 751 and sound card for PSK operation. Understand that only two cables are necessary if the VOX is utilized. Have a concern with possible grounds loops or voltage being feed into the rig however. Any assistance would be appreciated, thanks and 73

Al Cristaldi
kk7gv@arrl.net

--
Al Cristaldi
kk7gv@arrl.net

894. WTB cw filter, 9 Mhz IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-29 22:55:21 UTC
From: James Skalski <jskalski@bellatlantic.net>
Message-ID: <3C56E37E.7050107@bellatlantic.net>
Source record: 46835

I need a cw filter with a 9.000 Mhz IF frequency. Homebrew is OK.
--
73,

Jim n2go

895. Re: An Ambitious Project (HF HomeBrew Amp)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-29 23:41:21 UTC
From: SideBand <ab8lr@csotbs.org>
Message-ID: <3C573321.3080107@csotbs.org>
Source record: 46836

Rod:

This was just what I was looking for. Thanks a million!

ac6v wrote:

> Maybe look at the ARRL Handbook and also some Amp Links at URL:
> http://ac6v.com/techref.htm#AMP
> --
> 73 From AC6V, Rod In Oceanside, CA
> I doubt, therefore I might be!
>
> AC6V Mega Ham Index at http://ac6v.com
> AC6V Book For DXers at http://ac6v.com/DXSAMPLE.htm
> ==========
> SideBand wrote:
>
>
>>Hello OM's...
>>
>>I've recently decided it's time to build an amplifier for HF. I'm not a
>>rich man, so I'm looking to do this as low cost as I can. I'm also very
>>unfamiliar with the territory I'm thinking of venturing into now.
>>
>>I've decided to start with a couple of burnt out microwaves for the power
>>supplies. I figure the transformers in them should be enough to run a
>>semi-large single tube, or two smaller tubes.
>>
>>I've also (almost) settled on the Svetlana 4cx800A, or two Svetlana 4cs400A's.
>>
>>The problem here is that I'm in VERY unfamiliar territory. Does anyone know
>>any sources, online or otherwise, where I can get sample schematics for a
>>simple one or two tube amp? How about a source for the calculations
>>necessary to make this project sing without alot of distortion or
>>by-products, and to prolong the life of the tube(s)?
>>
>>I'm not looking for full legal limit here... 600 watts would be more than
>>enough, and 1200 would be dreamy in my particular situation.
>>
>>Thanks in advance for your time and consideration.
>>
>>--
>>73 de AB8LR, Chris
>>
>>http://csotbs.shopiwon.com/ for great deals on computer products.

>>
>
>
>
>
>

--
73 de AB8LR, Chris

http://csotbs.shopiwon.com/ for great deals on computer products.

896. Re: PSK/ICOM IC-751 Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-29 23:47:21 UTC
From: john graesser <graesser@tca.net>
Message-ID: <u5ed5m86gq42d4@corp.supernews.com>
Source record: 46837

When I put together the wiring for my Icom 701 and my htx-100, I didn't use vox and did get voltage isolation using audio isolation 1:1 transformers. It was more than 2 cables (as I recall it was about 5-6 wires, since it is packed away while I am at an apartment that doesn't allow any antennas or radio transmitting). It also worked with mntty, cwtype and cwget, and a couple of other soundcard programs.

Just go ahead and build the transister and couple of resister interface, using your ptt connected to the serial port and you will have all the digital modes available. As I recall it was in the digipan docs. It took less than an afternoon to build and wire up connectors for both radios. thanks, John.
KC5DWD

"Al Cristaldi" <megaman@cybernet1.com> wrote in message news:a376q90nsq@enews3.newsguy.com...
> Seeking help with wiring of my 751 and sound card for PSK operation.
> Understand that only two cables are necessary if the VOX is utilized. Have a
> concern with possible grounds loops or voltage being feed into the rig
> however. Any assistance would be appreciated, thanks and 73
>
>
> Al Cristaldi
> kk7gv@arrl.net
>
>
>
> --
> Al Cristaldi
> kk7gv@arrl.net
>
>
>

897. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-30 01:21:19 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0201291721.3f801d23@posting.google.com>
Source record: 46838
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

"Paul M. Jaeger" <n7pj@ieee.org> wrote in message
news:<3F9FF53841E8375C.0D21516982B36950.F30247300DCFCED6@lp.airnews.net>...
> Hi Mike,
>
> There was a note published in Electronic Design long ago, which
> now appears as Appendix C in Bob Pease "Troubleshooting Analog
> Circuits": Understanding and Reducing Noise Voltage on 3-Terminal
> Regulators" by Errol H. Dietz. Has a plot of noise spectra with an
> assortment of different bypass caps on an LM317.
>
> PJ

Thanks Paul, that's the one. It was a long time ago and doesn't seem
to appear in the web archives for Electronic Design or Bob Pease.

I've been trying to keep my paper library to a minimum, but I guess
there's some books you just can't do without :)

Regards,

Mike Monett
mrmonett@yahoo.com

898. Old homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-30 02:16:57 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3C575799.12DFD52B@visi.com>
Source record: 46839

Hi gang,
Does anyone remember a kit sold back in the late 60's called a
"Norelco Electronics Lab"? It was something like the Radio Shack 100 in
1 kit. You could build all sorts of coll stuff on a masonite (?) board
using spring clips.

Mine is long gone, but I'm wondering if anyone has seen one come up
for sale via the usual suspects (ebay etc).

72

Bob WB0POQ

899. Kenwood Interface

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-30 02:32:23 UTC
From: chapnom@aol.comnojunk
Message-ID: <20020129213223.22265.00000184@mb-cl.aol.com>
Source record: 46840

I'm looking for a detailed diagram of the interface that is used to control a Kenwood TS440S from the computer. I would appreciate any help with this.

Thanks, Ed
Ed

900. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-30 05:35:08 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C57860C.41E46A92@clifto.com>
Source record: 46841
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett wrote:
> Yes, Win 3.11. No worries about viruses or trojans, since they won't
> run. In fact, the virus checking programs won't run either, so I save
> a lot of time not having to keep up with the latest versions :)
>
> Windows loads in less than 4 seconds on a K6-450 MHz, so I get back
> online faster after it crashes. And I don't have to reformat my hard
> disk and reinstall it every three months :)

I steadfastly refused to go past 3.11 myself; I refused Win9x entirely.
Eventually my nephew shamed me into converting to linux, where I've been
happy ever since.

Epilogue: then the wife comes home needing Win98 for her real-estate
applications. *sigh*

--
Remember, "close" counts in horse-shoes, hand-grenades and nuclear warfare,
but in spamming, it's considered unnecessary precision. -- Alun Jones

901. Universal SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-30 08:47:06 UTC
From: remnan@hotmail.com
Message-ID: <9832a498.0201300047.7e6ba3c@posting.google.com>
Source record: 46842

Hello,
I would appreciate if anyone can give me information regarding
availability of kit or pcb's for a universal SSB exciter using the
9MHz Filter Method. The Solid State Design for the Radio Amateur
(1995)had a project by TERRY A WHITE (KL71AK) which is of particulr
interest to me.

Cheers
R.Narayanan
VU2YAP

902. Re: Spread Spectrum Homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-30 11:42:42 UTC
From: c.a.m@nospam.blueyonder.co.uk
Message-ID: <4imf5u0gu4eh5rj47gsfrv61f99o4bd61m@4ax.com>
Source record: 46843

>On Tue, 29 Jan 2002 16:30:41 GMT, mikea@mikea.ath.cx (Mike Andrews)
>wrote:
>
>>Jake Brodsky <frussle@erols.com> wrote:
>>
>>: We got around that problem by deriving our chip rate from the center
>>: frequency itself. Thus, if you locked on one, you'd be locked on the
>>: other.
>>
>>You can't do that! It makes too much sense!
>
>Hey, we were serious about getting this to work. The idea was to see
>if we could try a little NBFM on the one VCO we were using to generate
>our DSSS carrier. We would recover the signal and watch our VCO
>steering line for the modulation...

The thing about FM'ing any part of a SS carrier component is that it reduces it's security features, all modulation should be done on the phase of the carrier to maintain it's 'hiddeness'.

Although security is not what your allowed on the ham bands I just thought I'd let you know anyways :)

I've had the complete UK magazine Wireless World article scanned in (the SS 435MHz SS digital voice article I mentioned earlier), trouble is it's been put into a .doc file by me brother - the darned things 64meg :(

Got to find a way of exporting the individual scanned in pages from the .doc file into separate image files so that I can jpeg em before sending to the people who wanted a copy.

I have a cable modem so no problem for me to send as is but others do not.

Clive

903. Looking for DRAKE TR6

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-30 13:34:39 UTC
From: IW5ANQ Roberto <iw5anq@jumpy.it>
Message-ID: <a38solmta1@newsreader.mailgate.org>
Source record: 46844

Hi,
I'm looking for Drake TR6 50 MHz transceiver
only if very good electrical and look status.
Please contact me by Email

73 & 51 by IW5ANQ Roberto

904. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-30 14:43:11 UTC
From: Win Hill <whill@mediaone.net>
Message-ID: <3C58050A.370527D2@mediaone.net>
Source record: 46845
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett wrote:
>
> Ulrich Rohde shows a neat trick for reducing oscillator flicker
> noise in Fig. 15 of "Oscillator Basics and Low-Noise Techniques for
> Microwave Oscillators and VCOs"
>
> http://www.synergymwave.com/publications/PDF/Oscillators.pdf
>
> He claims a 15 dB reduction in close-in noise using the technique in
> "Analyze VCOs And Fractional-N Synthesizers", which used to be at
>
> http://www.mwrf.com/2000/aug1500/057-078.html
>
> but that url is no longer valid.

Strange, Microwaves & RF has every issue from Aug 1999 available
online, except the Aug 2000 issue. It must be a conspiracy! :-)

Thanks, /.-.\
((( ))
- Win \\\//
\\\
Winfield Hill //\\\
Rowland Institute for Science /// \\\
Cambridge, MA \/ \/

905. Wanted: OHMITE RF CHOKES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-30 15:01:00 UTC
From: k5dh@raytheon.com
Message-ID: <MUT58.124$Bd4.613@dfw-service2.ext.raytheon.com>
Source record: 46747
Cross-posted to: rec.radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I need some Ohmite RF chokes for a project, one type Z-28 and
two type Z-50. Anyone have some of these they can spare?

73,
Dean, K5DH
Visit my amateur radio web site at http://www.qsl.net/k5dh

906. Re: move a hard disk of boxes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-30 15:08:01 UTC
From: Tazanator <tazanator1@attbi.com>
Message-ID: <I%T58.6580$dZ1.23762@rwcrnsc52.ops.asp.att.net>
Source record: 46846

okay I have been doing computer repairs sence 1990 and I have NO IDEA what
he's talking about.....anybody understand this?

"liu" <sdwhsblyj3721@hotmail.com> wrote in message
news:a386ts$1gqt$663@news.cz.js.cn...
>
> Newest moving is stored , the price is low , capacity is
> large , can be according to the needs of yours the
> wanton size of adjustment capacity. This kind of
> equipment is to move a hard disk of boxes. Moving the
> box appearance of the hard disk exquisitly, succeed
> through alloy material, anti-vibration is designed , to
> dispel the heat is good, little volume, easy to hold
> under the arm and bring and to install is convenient,
> Namely insert and use USB interface promptly, price is .
> e-mail:sdwhsblyj3721@hotmail.com
>
>

907. Do you need HV transformers or filter chokes?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-30 15:57:24 UTC
From: arnoldg@c2i.net
Message-ID: <3c5817e9.6749776@news1.c2i.net>
Source record: 46748

Hello,

We have now in stock an extensive range of high voltage transformers
for valve amplifiers and other valve equipment. 230V primary and
secondaries for both anode and heater circuits.
Also filter chokes of 10H 50mA, 100mA etc. up to 10H 400mA.

Pictures, technical data and price can be found at my web site -
www.demostenes.no
(click on the English flag on the left side of the opening picture to
get English text).

Best regards,

Arnold Goks�yr
DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267
http://www.demostenes.no

Thousands of different valves in stock as well as
sockets,transformers,books,caps,resistors and
other components. Web site is updated every week.
You can order on-line.

908. Re: Kenwood Interface

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-30 18:29:57 UTC
From: Guidoted <guidotedDELETE@libero.it>
Message-ID: <FYW58.8879$3J1.302123@news2.tin.it>
Source record: 46750

Hello Ed,
you must insert in your radio the two chips: 8251 (UART) and CD4040
(cmos 12bit counter)
Then, you can build my interface:
http://www.hamlan.org/tech/kenwood232/knw232.htm
Ciao and 73
Guido, ik2bcp / iu2r / ab9dg

"Chapnom" <chapnom@aol.comnojunk> wrote in message
news:20020129213223.22265.00000184@mb-cl.aol.com...
> I'm looking for a detailed diagram of the interface that is used to
control a
> Kenwood TS440S from the computer. I would appreciate any help with this.
>
> Thanks, Ed
> Ed

909. Re: PSK/ICOM IC-751 Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-30 20:20:26 UTC
From: Wayne Faris <wfaris@inebraska.com>
Message-ID: <3C58558A.C97673F5@inebraska.com>
Source record: 46751

Try this URL. It should have all the info you need.

http://www.packetradio.com/psk31.html

Wayne L. Faris, KEï¿½BZ

Al Cristaldi wrote:

> Seeking help with wiring of my 751 and sound card for PSK operation.
> Understand that only two cables are necessary if the VOX is utilized. Have a
> concern with possible grounds loops or voltage being feed into the rig
> however. Any assistance would be appreciated, thanks and 73
>
> Al Cristaldi
> kk7gv@arrl.net
>
> --
> Al Cristaldi
> kk7gv@arrl.net

910. Re: move a hard disk of boxes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-30 20:42:53 UTC
From: root@127.0.0.1
Message-ID: <a39lsd$hmp@nntpb.cb.lucent.com>
Source record: 46752

Also schrieb tazanator1@attbi.com:
>okay I have been doing computer repairs sence 1990 and I have NO IDEA what
>he's talking about.....anybody understand this?

The translation is "I am a spammer."

Actually, it sounds like he's trying to hawk a USB-connected disk array.

--
The reason I use Linux is because I've used Windows.

911. Wanted: B & W Miniductors 3003 and 3016

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-30 21:27:29 UTC
From: k5dh@raytheon.com
Message-ID: <5zZ58.134$Bd4.548@dfw-service2.ext.raytheon.com>
Source record: 46753
Cross-posted to: rec.radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Subject sez it all... need one of each...

73,
Dean, K5DH
Visit my amateur radio web site at http://www.qsl.net/k5dh

912. Re: move a hard disk of boxes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-30 22:11:15 UTC
From: Tazanator <tazanator1@attbi.com>
Message-ID: <7c_58.70$OC6.195@rwcrnsc51.ops.asp.att.net>
Source record: 46754

"rich" <root@127.0.0.1> wrote in message
news:a39lsd$hmp@nntpb.cb.lucent.com...
> Also schrieb tazanator1@attbi.com:
> >okay I have been doing computer repairs sence 1990 and I have NO IDEA
what
> >he's talking about.....anybody understand this?
>
> The translation is "I am a spammer."
>
YES..... PLAIN ENGLISH LIVES!!!!

913. Re: move a hard disk of boxes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-30 22:33:21 UTC
From: Sylvan Butler <Znospam+noZs_0201@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrna5gt75.pvs.Znospam+noZs_0201@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 46755

On 30 Jan 2002 20:42:53 GMT, rich <root@127.0.0.1> wrote:
> Also schrieb tazanator1@attbi.com:
>>okay I have been doing computer repairs sence 1990 and I have NO IDEA what
>>he's talking about.....anybody understand this?
>
> The translation is "I am a spammer."

I think it's worse than that... It looks like a deliberate posting
composed of random english. (Not random words, the software is
smarter than that now.) h.pcr.m. (...==iie) seems likely.

sdb

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. ##### change ^ to @ ##### |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Fight terrorism, arm the population!

914. Re: move a hard disk of boxes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-30 23:31:59 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C58826F.27F927C9@clifto.com>
Source record: 46756

Sylvan Butler wrote:
> I think it's worse than that... It looks like a deliberate posting
> composed of random english.

It looks more to me like something Babelfish would produce. I'd say the
spammer is using a dictionary to literally translate Chinese to English.

--
Remember, "close" counts in horse-shoes, hand-grenades and nuclear warfare,
but in spamming, it's considered unnecessary precision. -- Alun Jones

915. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-30 23:40:26 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0201301540.548d56d4@posting.google.com>
Source record: 46757
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Win Hill <whill@mediaone.net> wrote in message news:<3C58050A.370527D2@mediaone.net>...
> Mike Monett wrote:
> >
> > Ulrich Rohde shows a neat trick for reducing oscillator flicker
> > noise in Fig. 15 of "Oscillator Basics and Low-Noise Techniques for
> > Microwave Oscillators and VCOs"
> >
> > http://www.synergymwave.com/publications/PDF/Oscillators.pdf
> >
> > He claims a 15 dB reduction in close-in noise using the technique in
> > "Analyze VCOs And Fractional-N Synthesizers", which used to be at
> >
> > http://www.mwrf.com/2000/aug1500/057-078.html
> >
> > but that url is no longer valid.
>
> Strange, Microwaves & RF has every issue from Aug 1999 available
> online, except the Aug 2000 issue. It must be a conspiracy! :-)
>
> ___
> Thanks, /.-.\
> ((( ))
> - Win \\\//
> \\\
> Winfield Hill //\\\
> Rowland Institute for Science /// \\\
> Cambridge, MA \/ \/

Win,

Your sense of humor is priceless!

FWIW, Matjaz Vidmar describes a technique he published in 1985 that
sounds very similar to Rohde's feedback scheme:

"The phase noise can be reduced by a carefully designed bias
regulator, to stabilise the current through the bipolar
transistor, so that the impedances and phase shifts do not
change."

http://www.vhfcomm.co.uk/s53mvvco.htm

If my guess is true, Rohde's patent may be invalid due to prior art.

Regards,

Mike Monett
mrmonett@yahoo.com

916. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-30 23:48:17 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C5885EC.5C34@pop.removethistomailme.net>
Source record: 46758
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Clifton T. Sharp Jr. wrote:
>
> I steadfastly refused to go past 3.11 myself; I refused Win9x entirely.
> Eventually my nephew shamed me into converting to linux, where I've been
> happy ever since.
>
> Epilogue: then the wife comes home needing Win98 for her real-estate
> applications. *sigh*
>

The ironic thing is that even the beta releases of Win95 were so much
better than Win 3.1x it's not even funny. Most professional DOS/Windows
developers (like myself) installed the spring '95 beta release of
Chicago and never looked back. You and Mike, on the other hand, appear
to have barricaded yourself in a roomful of snakes just to avoid dealing
with the roomful of worms next door. :)

It's perfectly reasonable to go with Linux over Win9x if that's your
thing, but using Windows 3.1 in 2002 just to be contrary is, to say the
least, self-defeating.

-- jm

---

http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

---

917. Re: move a hard disk of boxes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-31 00:37:55 UTC
From: " .Your Friend Bill" <none@coqui.net>
Message-ID: <3C5891E3.70260C72@coqui.net>
Source record: 46759

"Clifton T. Sharp Jr." wrote:
>
> Sylvan Butler wrote:
> > I think it's worse than that... It looks like a deliberate posting
> > composed of random english.
>
> It looks more to me like something Babelfish would produce. I'd say the
> spammer is using a dictionary to literally translate Chinese to English.

There's an example of a random BS generator on this site
http://www.dack.com/web/bullshit.html
-Bill

918. Using PC headsets (or cellpone headsets) with 2 meter rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-31 00:56:05 UTC
From: <>
Message-ID: <3c5895c7.259010297@news.igs.net>
Source record: 46760

Has anyone used a PC or a cellphone headset with a typical 2 meter
mobile rig (I have a Yaesu FT1500m)?

Got a schematic of what was necessary to make it work?

Thanks

Larry Bradley VE3CRX
Remove "removeme" from my e-mail address for direct mail
Ottawa, Canada

(use the e-mail address above to send directly to me)

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

919. Re: How to connect lights etc. to clockwork Freeplay generator?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-31 01:26:21 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0201301726.30be393@posting.google.com>
Source record: 46761

Kc7eip <kc7eip_nospam@shaw.ca> wrote in message
news:<Xns91A4206EDD30Ekc7eipshawca@24.64.223.211>...
> williehearst@aol.com (Willy) wrote in
> news:bba37f0e.0201271443.f57e0b9@posting.google.com:
>
> > My son has got himself involved with a school science project in which
> > he decided that he would prove that a Bayliss
> > FreePlay generator could power low voltage lightbulbs, buzzers etc.as
> > well as the radio. Unfortunately, neither of us has any
> > useful knowledge of electronics and cannot make the lights etc.
> > function when simply connected to the generator output
> > terminals. Can any one help with this problem using real simple
> > instructions? I would be very grateful for info.Thanx. WH
> >
>
> Well the first thing i would do is test the voltage cooming off of the
> generator... you can do this with any common digital voltmeter. This should
> give you an idea of what you have to work with... (You may not have much
> i'm sure alot of the internals of the radio are passive and that the
> generator may be used to powere the audio amp only...) Once you know your
> voltage try and find a lamp that will run on that voltage... You may be
> stuck running a low power led vice conventianl lamp.

QST reviewed the radio some years back (I don't know the issue), and
they did deal with the generator. I don't recall the details, but
it was definitely low current. I think they tried to run a one or
two transistor transmitter from the generator, and discovered that
it was not a very stable supply.

On the other hand, it is a superhet as far as I know. Nothing
special, the unique part of the radio is the generator, and the
high price is so to fund the main project, getting the radios
into the hands of those who really need them. One key point
I remember from the review was that the audio output was very low,
which is where they saved a lot in current drain.

Michael VE2BVW

920. digital swr/wattmeter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-31 06:25:25 UTC
From: "Gary M. Belcaster" <gbelcas@pressenter.com>
Message-ID: <gbelcas-BC0B10.00252531012002@corp.supernews.com>
Source record: 46762

Just read a July '99 qst article detailing LDG's digital wattmeter. I would like to try to do the same by 'kitbashing' a couple of old heathkit swr/wattmeters (the venerable HM-102 and HM-2102) and an 8052-based SBC I have. Got a couple of quick prelim questions. Would like to know if the 2102 marketed as a vhf meter would work with satisfactory sensitivity/accuracy at 440 Mhz? Gonna whip out the voltmeter tomorrow and test it myself but anyone have any idea what the ballpark is on voltage out of the pickup coil w/ 100 watts HF on the hm-102?? Thanks very much in advance (anybody want to collaborate with me on this ??)

Gary

921. Moving 2.45GHz 1 meter - Pls help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-31 11:26:25 UTC
From: Gollywog <_eng@ilos.net>
Message-ID: <BR968.668$8i2.21571@news2.mts.net>
Source record: 46763

Anybody/Everybody:

I'm working on ideas for an antenna array for a remote control project. I need to move a 2.45GHz unmodulated carrier from a receiving antenna and pre-amp board 1 foot to a switching/amp board then 3 feet to a second switching/amp board then 1 1/2 feet to a central amp/mixer board. The array structure itself is made of 1 inch square hollow aluminum tubing.

Do I use coax of some sort and run the lines inside the aluminum tubing? My signal is single ended after the first board but I could convert to differential if twisted pair is going to give me better noise rejection and/or substantially less signal attenuation. Is there any way to use wave guides inside the 1" tubing? I need a fairly cheap solution (since there are 40 antennas in the array) and it has to withstand fairly substantial vibration and mechanical stresses.

Suggestions appreciated,

Mike Whitfield (VA4MGW)

```
********* \\\\lll//// *********
********** \ -- -- / **********
*********** (\@ @/) ***********
*** --oOOOo---(_)---oOOOo-- ***
```

922. Re: Moving 2.45GHz 1 meter - Pls help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-31 17:38:46 UTC
From: "Carl R. Stevenson" <wa6vse-shack@fast.net>
Message-ID: <3c598322_1@news7.fast.net>
Source record: 46764

-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

"Gollywog" <_eng@ilos.net> wrote in message
news:BR968.668$8i2.21571@news2.mts.net...
>
> Anybody/Everybody:
>
> I'm working on ideas for an antenna array for a remote control
project. I
> need to move a 2.45GHz unmodulated carrier from a receiving antenna
and
> pre-amp board 1 foot to a switching/amp board then 3 feet to a
second
> switching/amp board then 1 1/2 feet to a central amp/mixer board.
The array
> structure itself is made of 1 inch square hollow aluminum tubing.
>
> Do I use coax of some sort and run the lines inside the aluminum
tubing?

- From the brief description you've given, that sounds like it's
probably a reasonable approach ... just use a coax type that's
low loss at 2.4 GHz and use connectors suitable for the frequency.
(RG-58 and PL-259's won't cut it ...)

> My
> signal is single ended after the first board but I could convert to
> differential if twisted pair is going to give me better noise
rejection
> and/or substantially less signal attenuation.

Stay with coax ...

> Is there any way to use wave guides inside the 1" tubing?

1" tubing would be well below waveguide cutoff frequency at
2.4 GHz, so that wouldn't be possible ...

>I need a fairly cheap solution (since there are
> 40 antennas in the array) and it has to withstand fairly substantial
> vibration and mechanical stresses.

As I said, use low-loss coax and appropriate connectors.
You get what you pay for, but some surplus shopping may
yield good savings.

73,
Carl - wa6vse

-----BEGIN PGP SIGNATURE-----
Version: PGP for Personal Privacy 5.5.3

iQA/AwUBPFmBHZe+N6+q84HiEQKdbACgifqJCpS3mbAnNXKNXm4AisUC2eMAoMyN
6srYbkl0FUamp9vQE2plrc7U
=basb
-----END PGP SIGNATURE-----

923. Re: An Ambitious Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-31 18:46:10 UTC
From: yardleyite@aol.com
Message-ID: <20020131134610.09863.00000759@mb-fi.aol.com>
Source record: 46765

Chris,
Take my advice and bite the bullet. Go for a single (dual is better)
4-1000A in class B and you'll have an amp you'll be proud of for the rest of
your life. If you drive it conservatively the tube can last you 40 years or
more. Besides, they're relatively cheap on the open market, and good pulls are
always available for a reasonable price.
If you use a plate supply of say 3900Vat 5.0 or so KVA that will be ample to
drive the tube to legal limit and then some with 60 watts or so.
I have one I built up and run 6KV on the plate and have driven it with 200
watts. It really sings and commands a good signal on the band.
Just my two cents worth.....
73 de Joe Cro N3IBX

924. Re: Homebrew Stuff for the Disabled, Elderly Ham.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-31 19:06:06 UTC
From: Another user <at@btinternet.com>
Message-ID: <a3c4itag1@helle.btinternet.com>
Source record: 46766

Targetting the disabled for your sales is very lame and I think I am correct
is not welcome here (I am disabled myself), so get a spot on a market place
with your suit case.

"Bill" <wa8mea@hotmail.com> wrote in message
news:8a260fb2.0201221608.6dbea00c@posting.google.com...
> Here is a site that has assembled, homebrew type stuff that's a lot of
> fun to operate! Great for hams who are disabled and elderly and not
> able to "roll their own". Heck...the gadgets are fun enough and low
> cost enough for ANY ham!
>
> -40 meter QRP transmitter
> -Active antenna
> -Antenna tuner
> -Portable Dipoles
>
> And more! Just click:
>
> http://qth.com/dwm

925. Re: Moving 2.45GHz 1 meter - Pls help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-31 20:09:11 UTC
From: Gollywog <_eng@ilos.net>
Message-ID: <Hvh68.672$8i2.21161@news2.mts.net>
Source record: 46767

Am I better or worse off if I skip the connectors and solder directly to the boards?

Thanks,
Mike

********* \\\\lll//// *********
********** \ -- -- / **********
********** (\@ @/) **********
*** --oOOOo---(_)---oOOOo-- ***

926. Re: How to connect lights etc. to clockwork Freeplay generator?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-31 21:42:30 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C59BA46.275E1F23@clifto.com>
Source record: 46768

Michael Black wrote:
> On the other hand, it is a superhet as far as I know. Nothing
> special, the unique part of the radio is the generator, and the
> high price is so to fund the main project, getting the radios
> into the hands of those who really need them. One key point
> I remember from the review was that the audio output was very low,
> which is where they saved a lot in current drain.

Just a guess, but I'll bet a radio made to work on such a teensy little
generator would be really frugal on batteries.

--
Remember, "close" counts in horse-shoes, hand-grenades and nuclear warfare,
but in spamming, it's considered unnecessary precision. -- Alun Jones

927. Re: RF in Microphone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-31 22:07:37 UTC
From: KA9CAR <nospam@nospam.usa>
Message-ID: <a3cf31ono1@news1.tribune.com>
Source record: 46769
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On the one that I had the microphone was commoned with the case.
I separated the case and the microphone lines at the switch in the base,
leaving the case of the mic connected to the "ground" of the radio, then
hooked the mike to the radio mic+ and mic-.
Insulate the mic element from the case in the head.
KA9CAR

Scott McClements <yetbbwa@grove.iup.edu> wrote in message
news:3C4DB07B.74DD025D@grove.iup.edu...
> Hello,
>
> I have a Astatic TUG-9 Stand and a D-104 head that I put a electret
> condensor element into. There isn't any pre-amp circuit and I power the
> element from a 9 volt in the mic base. I am getting RF into the mic that
> is causing distortion on the transmitted audio - I know it for sure
> because it happens when I turn the RF power up. I don't have the problem
> with the stock microphone. I have used bypass capacitors across the
> lines leaving the microphone and still have them problem - what else can
> I try? I have grounding bus and < 1/4 wavelength grounding strap to
> ground (basement station).
>
> Thanks,
>
> Scott.
>
>
>

928. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-31 23:41:22 UTC
From: PCS ELECTRONICS <info@pcs-nooo-spam-electronics-nospam.com>
Message-ID: <1012520650.802827@proxy.amis.net>
Source record: 46773
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I know the guy, I've attended one of his lectures on spectrum analyzers,
he is a genius.

--
Best regards,
Marko - PCS Electronics

Turn your PC into a FM radio station!
http://www.pcs-electronics.com
tel +386 31 318 236

"Mike Monett" <mrmonett@yahoo.com> wrote in message
news:7e4a2a11.0201301540.548d56d4@posting.google.com...
> Win Hill <whill@mediaone.net> wrote in message
news:<3C58050A.370527D2@mediaone.net>...
> > Mike Monett wrote:
> > >
> > > Ulrich Rohde shows a neat trick for reducing oscillator flicker
> > > noise in Fig. 15 of "Oscillator Basics and Low-Noise Techniques for
> > > Microwave Oscillators and VCOs"
> > >
> > > http://www.synergymwave.com/publications/PDF/Oscillators.pdf
> > >
> > > He claims a 15 dB reduction in close-in noise using the technique in
> > > "Analyze VCOs And Fractional-N Synthesizers", which used to be at
> > >
> > > http://www.mwrf.com/2000/aug1500/057-078.html
> > >
> > > but that url is no longer valid.
> >
> > Strange, Microwaves & RF has every issue from Aug 1999 available
> > online, except the Aug 2000 issue. It must be a conspiracy! :-)
> >
> > ___
> > Thanks, /.-.\
> > ((( ))
> > - Win \\\//
> > \\\
> > Winfield Hill //\\\
> > Rowland Institute for Science /// \\\
> > Cambridge, MA \/ \/
>
> Win,
>

> Your sense of humor is priceless!
>
> FWIW, Matjaz Vidmar describes a technique he published in 1985 that
> sounds very similar to Rohde's feedback scheme:
>
> "The phase noise can be reduced by a carefully designed bias
> regulator, to stabilise the current through the bipolar
> transistor, so that the impedances and phase shifts do not
> change."
>
> http://www.vhfcomm.co.uk/s53mvvco.htm
>
> If my guess is true, Rohde's patent may be invalid due to prior art.
>
> Regards,
>
> Mike Monett
> mrmonett@yahoo.com

929. Re: WTB cw filter, 9 Mhz IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-31 23:44:19 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3C59D6D3.4590D55C@sympatico.ca>
Source record: 46770

You can buy these at International Radio

http://www.qth.com/inrad/

James Skalski wrote:

> I need a cw filter with a 9.000 Mhz IF frequency. Homebrew is OK.
> --
> 73,
>
> Jim n2go

930. Re: Moving 2.45GHz 1 meter - Pls help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-31 23:52:39 UTC
From: "Carl R. Stevenson" <wa6vse-shack@fast.net>
Message-ID: <3c59db44$1_2@news7.fast.net>
Source record: 46772

"Gollywog" <_eng@ilos.net> wrote in message
news:Hvh68.672$8i2.21161@news2.mts.net...
>
>
>
> Am I better or worse off if I skip the connectors and solder directly to
the
> boards?

Depends on how much of an impedance "bump" you can
tolerate ... vs. the cost of the connectors.

50 Ohm connectors like SMA, SMB, etc. with low loss coax
and good microstrip construction on the PCBs will give the
best performance, lowest loss, and best SWR. Skipping
the connectors and soldering directly to the PCB is a cost-
saving shortcut that may or may not be acceptable.

For example, are you concerned with phasing or phase
matching?

I don't know enough about your application to know how
much mismatch you can tolerate, but at 2.4 GHz, it doesn't
take a lot of "tails" in the center conductor and shield braid
connections to create mismatch. (It's not like HF, where you
can have an inch of center conductor and an inch of shield
braid to the center pin and ground lug on an SO-239 and
not even notice it ...)

Carl - wa6vse

931. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-01-31 23:54:15 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3C59D926.C4F067D@sympatico.ca>
Source record: 46771
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Actually Rhode has done several articles in QST.
For cleaning up the DDS he ran the DDS output at 10.7 MHz and ran it through

readily available crystal filters, (Digi-Key has them).

For the Oscillator he showed that it was better to get rid of the
traditional
gate to ground diode. This improves phase noise performance.

His low noise oscillator for 74 - 105 MHz uses a 2 tap inductor.
The 1st tap goes to the fet gate, the 2nd tap went to the fet source, the
bottom of the inductor went to ground.

He also paralleled multiple vari-cap diodes together to reduce the
noise from these diodes, the idea being if noise is positive going on
one diode, another diode could be negative going and the two help to
cancel each other.

QST May, June 1994, Key Components of Modern Receiver Design

I've built his Low Noise Oscillator/PLL for 74 - 105 MHz. My main
work is programmming a micro-controller to control it.
Check out the Elecraft designs as well.

Bill Kirkland
VE3JHU

932. Audels Text on Radio or Electronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 00:20:15 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C59DF3F.27BC367C@ieee.org>
Source record: 46774

Hello, All,

When a youth (early 1970s) at my school library we had a text published by Audels.

It had transistorized circuits, and specifically a 3 transistor regenerative receiver.

Does anyone recall the title and author? (It is not the Radioman's Guide or is it?)

Any clues would be helpful.

Clyde
KA1CRV

933. Re: Audels Text on Radio or Electronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 00:35:14 UTC
From: " .Your Friend Bill" <none@coqui.net>
Message-ID: <3C59E2C2.66134949@coqui.net>
Source record: 46775

"Clyde R. Shappee" wrote:
>
> Hello, All,
>
> When a youth (early 1970s) at my school library we had a text published
> by Audels.
>
> It had transistorized circuits, and specifically a 3 transistor
> regenerative receiver.
>
> Does anyone recall the title and author? (It is not the Radioman's
> Guide or is it?)
>
> Any clues would be helpful.
>
> Clyde
> KA1CRV

I just hit ebay and got back 16 matches but none seem recent enough to
have transistorized circuits.
You might want to keep trying that or try one of the big online
booksellers...many have a 'used/out-of-print' section.
-Bill

934. Re: Audels Text on Radio or Electronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 01:03:08 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C59E94C.912E2652@ieee.org>
Source record: 46776

Thanks... I did the same on Ebay.

The problem with the big used online booksellers is they will return 200
items in a search, and I am still not sure of the title.

Unless someone clues me in, I will continue to look at Ebay as the prices are
reasonable, <$10 so if I buy a book and I'm wrong, it isn't a big deal.

Thanks again.

Clyde

" .Your Friend Bill" wrote:

> "Clyde R. Shappee" wrote:
> >
> > Hello, All,
> >
> > When a youth (early 1970s) at my school library we had a text published
> > by Audels.
> >
> > It had transistorized circuits, and specifically a 3 transistor
> > regenerative receiver.
> >
> > Does anyone recall the title and author? (It is not the Radioman's
> > Guide or is it?)
> >
> > Any clues would be helpful.
> >
> > Clyde
> > KA1CRV
>
> I just hit ebay and got back 16 matches but none seem recent enough to
> have transistorized circuits.
> You might want to keep trying that or try one of the big online
> booksellers...many have a 'used/out-of-print' section.
> -Bill

935. Has anyone homebrewed an antenna for an HT with an SMA connector?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 01:43:31 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0201311743.25bb5e9@posting.google.com>
Source record: 46777
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I have a Yaesu FT-50R HT transceiver, and I use the ADI/Premier RD-98 antenna with it when walking around.

The pros of the RD-98 antenna:
1. It is small enough to easily and quickly attach it to my radio.
2. It is dual-band (2m and 70 cm).
3. It has MUCH better performance than the rubber duck.
4. It is flexible enough to avoid breakage even when I bend it. This allows it to withstand MUCH rougher treatment than a rigid telescoping antenna can handle.

The cons of the RD-98 antenna:
1. It lacks a ground plane, and this causes the antenna to vastly underperform my J-Pole antenna and my mag-mount mobile antenna (assuming there is a ground plane). These other two antennas have their merits, but they aren't as convenient to use as the RD-98. (In case you are wondering, the J-pole has an SMA connector. I have a piece of coax with an SMA connector at one end for the radio and a PL-259 at the other end.)
2. I have to use a BNC-SMA adapter with it. This does add stress to the connector on the radio (but thankfully, nothing like the strain that a rigid telescoping antenna would cause). I know that there is now an SMA version of the antenna (which was not available when I first bought my RD-98), but a homebrew version would be cheaper AND be more conducive to the addition of radials.

Has anyone here homebrewed a 2m/70cm HT antenna with an SMA connector? I think QST had an article on this once, but the antenna used PL-259s or SO-239s.

The RF issues seem pretty easy. The vertical element can be a piece of metal wire that is 1/4 wavelength on 147 MHz, which would also be 3/4 wavelength on 441 MHz. This would be about 20 inches before making a slight adjustment for the velocity factor. I would then solder this to the inner part of the connector (I'm not sure what this is called, but it's analogous to the PL-259 at the end of a piece of coax). I would solder to the outer part of the connector one or more radials in order to provide a good ground plane. Then PRESTO! I have a REAL antenna that I can screw onto my Yaesu FT-50R.

The mechanical issues are much more challenging. What do I need at the feedpoint to hold the entire antenna together? What does it take to prevent moisture from leaking inside if I'm out in the rain? What does it take to keep the vertical element and the radials flexible enough (to avoid breaking the antenna or radio and make it more

compact for storage) and firm enough (so they retain their shape)?
16-guage solid wire, perhaps?

The RD-98 antenna seems to be made out of a flexible piece of wire
covered with a black plastic or rubber coating. There is plastic
cone-like object attached to the top of the BNC connector. I assume
it is there to mechanically shield the antenna feedpoint so it doesn't
fall apart.

Jason Hsu, AG4DG
jason_hsu_802701@@@@yahoo.com
http://www.jasonhsu.com/ham_radio-technical.html

936. Re: Old homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 02:27:57 UTC
From: Alex V Flinsch <avflinsch@att.net>
Message-ID: <N2n68.3963$zT.275906@bgtnsc06-news.ops.worldnet.att.net>
Source record: 46778

On or about Tue, 29 Jan 2002 21:16:57 -0500, "Bob Liesenfeld"
<wb0poq@visi.com> wrote about the following in article
<3C575799.12DFD52B@visi.com>:

> Hi gang,
> Does anyone remember a kit sold back in the late 60's called a
> "Norelco Electronics Lab"? It was something like the Radio Shack 100 in
> 1 kit. You could build all sorts of coll stuff on a masonite (?) board
> using spring clips.
>

Never had that kit, but I had something called "Electro" which had small
plastic blocks with electronic components in them, the leads on the
components were attached to magnets on the sides of the cubes, and the
cubes had schematic symbols painted on the top. To build a project, all
you needed to do was "draw" the scermatic using the plastic cubes (which
attached to a small steel plate, via magnets in the base).

--
Alex
KC2IVL
Linux 2.4.17 #2 Fri Dec 28 22:30:02 EST 2001 i686
9:20pm up 1 day, 2:38, 2 users, load average: 0.04, 0.05, 0.00

937. Re: bigger penis in 3 weeks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 02:46:58 UTC
From: Another user <at@btinternet.com>
Message-ID: <a3cvj2$p36$1@paris.btinternet.com>
Source record: 46779
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

```
Will it work on my dipole hi from 40 to 80 over night

"KC8JBO" <kc8jbo@alt.net> wrote in message news:a2h93c$mte$0@pita.alt.net...
>
> <xphbtf@hotmail.com> wrote in message
> news:8UU28.5126$2V3.17109@news.uswest.net...
> > I found this interesting article on penis development:
> >
> > " Amazing excersise system to improve your sex life, increase your
> > penis size, and help to reduce the risk of prostate cancer"
> >
> > The cost is less than $40.00 and seems good value, please if you intend
on
> looking at this link,
> > I will let you know that it is non-porn, however there are a few
"graphic"
> pics.
> >
> > go to http://zlap.to/pd11
> > cya, Im off to bed now
> > zzz
>
> Hey Stagger Lee and Arf arf!, there's hope for you two to save your
> marriages yet, and you can afford to cash in $40 worth of your food
stamps.
>
>
>
>
>
```

938. Re: Homebrew Stuff for the Disabled, Elderly Ham.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 03:26:59 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0201311926.458f214c@posting.google.com>
Source record: 46780

"Another user" <at@btinternet.com> wrote in message
news:<a3c4itag1@helle.btinternet.com>...
> Targetting the disabled for your sales is very lame and I think I am correct
> is not welcome here (I am disabled myself), so get a spot on a market place
> with your suit case.
>
>
I certainly wondered at the contradiction between "assembled" and
"homebrew". Obviously, the stuff must be manufactured on a very small
scale. If somebody wants something that's homemade, surely they'd
want to make it themselves. If they are unable to, I'm not sure
what the appeal would be for someone else to build it. In a lot of
cases, it's the building that is the appeal, more than the finished
product. (I realize, there may be some exceptions, such as when someone
describes some accessory that is not commercially available, but then,
someone who sold assembled units would only be filling a market.)

And I do remember seeing articles from hams who built their own
stuff, and happened to be blind. Not being blind, that strikes me
as being quite difficult, yet they were able to workaround the problems,
and enjoyed building stuff as much as the rest of us.

Michael VE2BVW

> "Bill" <wa8mea@hotmail.com> wrote in message
> news:8a260fb2.0201221608.6dbea00c@posting.google.com...
> > Here is a site that has assembled, homebrew type stuff that's a lot of
> > fun to operate! Great for hams who are disabled and elderly and not
> > able to "roll their own". Heck...the gadgets are fun enough and low
> > cost enough for ANY ham!
> >
> > -40 meter QRP transmitter
> > -Active antenna
> > -Antenna tuner
> > -Portable Dipoles
> >
> > And more! Just click:
> >
> > http://qth.com/dwm

939. Re: How to connect lights etc. to clockwork Freeplay generator?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 03:52:20 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0201311952.39d3e795@posting.google.com>
Source record: 46781

"Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message
news:<3C59BA46.275E1F23@clifto.com>...
> Michael Black wrote:
> > On the other hand, it is a superhet as far as I know. Nothing
> > special, the unique part of the radio is the generator, and the
> > high price is so to fund the main project, getting the radios
> > into the hands of those who really need them. One key point
> > I remember from the review was that the audio output was very low,
> > which is where they saved a lot in current drain.
>
> Just a guess, but I'll bet a radio made to work on such a teensy little
> generator would be really frugal on batteries.

I was trying to find an answer to a question someone asked here (it's
on the tip of my tongue), and while trying to find it last night,
I just happened on the issue of QST that I was referring to.

It was the August 1996 issue, and it wasn't so much a review as
an article about the radio.

It says it's a 3volt generator. Apparently, the clockwork mechanism
is the important part, and it drives a "tiny 3vdc generator". I
wonder if that's actually a motor used in reverse, or they use something
special.

I see no mention of the current out of the generator (maybe they
never measured it), but they say they measured 15mW of audio in
the ARRL Labs when the radio was run off the generator, and a
whopping "almost 93mW audio while using an external 9vdc source".

Later down, it says "Tests showed the speed varied with load,
and voltage regulation was poor, making it generally not suitable
as a transmitter power source".

I thought I heard Art Bell hawking the radios, and there's a later
model or accessory that takes the generator output and powers an
"LED flashlight". That might be the place to start for the original
poster. I can imagine if you picked the wrong bulb, it would
load the generator so much that voltage would drop too low to
light the bulb. So they'd want to start with a very low current
bulb, with a low voltage rating.

Michael VE2BVW

940. Re: Has anyone homebrewed an antenna for an HT with an SMA connector?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 08:17:17 UTC
From: post_to_usenet@hotmail.com
Message-ID: <b6b4e772.0202010017.32110d46@posting.google.com>
Source record: 46782
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

jason_hsu@my-deja.com (Jason Hsu) wrote
--8<--
> Has anyone here homebrewed a 2m/70cm HT antenna with an SMA connector?
> I think QST had an article on this once, but the antenna used PL-259s
> or SO-239s.
>
> The RF issues seem pretty easy. The vertical element can be a piece
> of metal wire that is 1/4 wavelength on 147 MHz, which would also be
> 3/4 wavelength on 441 MHz. This would be about 20 inches before
> making a slight adjustment for the velocity factor. I would then
> solder this to the inner part of the connector (I'm not sure what this
> is called, but it's analogous to the PL-259 at the end of a piece of
> coax). I would solder to the outer part of the connector one or more
> radials in order to provide a good ground plane. Then PRESTO! I have
> a REAL antenna that I can screw onto my Yaesu FT-50R.
>
> The mechanical issues are much more challenging. What do I need at
> the feedpoint to hold the entire antenna together? What does it take
> to prevent moisture from leaking inside if I'm out in the rain? What
> does it take to keep the vertical element and the radials flexible
> enough (to avoid breaking the antenna or radio and make it more
> compact for storage) and firm enough (so they retain their shape)?
> 16-guage solid wire, perhaps?
--8<--
> Jason Hsu, AG4DG
> jason_hsu_802701@@@@yahoo.com
> http://www.jasonhsu.com/ham_radio-technical.html

Hi Jason,

I don't know if this is exactly what you are looking for, but I have homebrewed an antena for my TH-D7 that I regularly use for the outdoor events in my club and works reasonably well (much better than the supplied one):

(I hope my less than perfect english allows you to understand what I am explaining)

Just get a thin wire of flexible steel from a model toy shop; they use it in radio controlled planes and similar. Here they call it piano wire, because aparently it is similar to the wires used to make pianos. Well, cut it to about .27 wavelength (don't know why .27 instead of 1/4, but most references I found recomended it). Solder it to the inner pin of the SMA and put it in place. Fill the inside of

the SMA with two component epoxy or other heavy-duty glue. Put something at the other end of the wire to prevent it from harming you or others. You have it. You can bent it, allow rain to fall on it, ... Most important, if the wire is thin enought it acts as a "mechanincal fuse" for your SMA. It will bent before your SMA breaks.

Just another thing: Cut a 1/4 w. thin wire and put and 'eyelet?' on it, so that you can put it in the SMA before screwing the antenna on it. It will kind of work as a radial. It DOES make a difference with _any_ antena you are using!

Toni

941. Help: BURNDEPT Low band PMR set.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 08:50:30 UTC
From: Keith Haywood <keith.haywood@icl.com>
Message-ID: <a3dksc$1itn$1@news.icl.se>
Source record: 46783
Cross-posted to: uk.radio.amateur,rec.radio.amateur.homebrew

Can anyone help with a circuit diagram or board layout for a
Burndept BE-525 low band transceiver - I'm trying to get one going on 4
metres.

It is a late model, three channel, crystal controlled job - probably ex Home
Office or similar, and was originally running on 80.2 MHz.

The only other markings on the case are
Type No:- M 2010 FVL.

Also, there appears to be a timer on the transmitter which limits
transmission time to around 1.5 / 2 minutes before the set switches back to
receive - anyone any ideas on how to override the timeout ?

Thanks.

g8hxe@iclway.co.uk

942. Re: bigger penis in 3 weeks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 11:10:53 UTC
From: KC8JBO <kc8jbo@alt.net>
Message-ID: <a3e316taf1@pita.alt.net>
Source record: 46784
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

"Another user" <at@btinternet.com> wrote in message
news:a3cvj2$p36$1@paris.btinternet.com...
> Will it work on my dipole hi from 40 to 80 over night

LOL!!!!!! Only on verticals........LOL!!!!!!!!!

> "KC8JBO" <kc8jbo@alt.net> wrote in message
news:a2h93cmte0@pita.alt.net...
> >
> > <xphbtf@hotmail.com> wrote in message
> > news:8UU28.5126$2V3.17109@news.uswest.net...
> > > I found this interesting article on penis development:
> > >
> > > " Amazing excersise system to improve your sex life, increase your
> > > penis size, and help to reduce the risk of prostate cancer"
> > >
> > > The cost is less than $40.00 and seems good value, please if you
intend
> on
> > looking at this link,
> > > I will let you know that it is non-porn, however there are a few
> "graphic"
> > pics.
> > >
> > > go to http://zlap.to/pd11
> > > cya, Im off to bed now
> > > zzz
> >
> > Hey Stagger Lee and Arf arf!, there's hope for you two to save your
> > marriages yet, and you can afford to cash in $40 worth of your food
> stamps.

943. Re: bigger penis in 3 weeks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 13:15:00 UTC
From: Anonymous <Half_Wit_Wiseman@CurtainsBoyWogey.com>
Message-ID: <a3e483$254$0@dosa.alt.net>
Source record: 46785
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,alt.cocksucker.roger-wiseman

```
"KC8JBO" <kc8jbo@alt.net> wrote in message news:a3e316$taf$1@pita.alt.net...
>
> "Another user" <at@btinternet.com> wrote in message
> news:a3cvj2$p36$1@paris.btinternet.com...
> > Will it work on my dipole hi from 40 to 80 over night
>
> LOL!!!!!! Only on verticals........LOL!!!!!!!!!
>
>
> > "KC8JBO" <kc8jbo@alt.net> wrote in message
> news:a2h93c$mte$0@pita.alt.net...
> > >
> > > <xphbtf@hotmail.com> wrote in message
> > > news:8UU28.5126$2V3.17109@news.uswest.net...
> > > > I found this interesting article on penis development:
> > > >
> > > > " Amazing excersise system to improve your sex life, increase your
> > > > penis size, and help to reduce the risk of prostate cancer"
> > > >
> > > > The cost is less than $40.00 and seems good value, please if you
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> > > > looking at this link,
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> > > > go to http://zlap.to/pd11
> > > > cya, Im off to bed now
> > > > zzz
> > > >
> > > Hey Stagger Lee and Arf arf!, there's hope for you two to save your
> > > marriages yet, and you can afford to cash in $40 worth of your food
> > stamps.
>
>
>

?
```

944. Smallest QRP Rig?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 13:18:55 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0202010518.77348e88@posting.google.com>
Source record: 46786

Just curious...

How small can a QRP homebrew transceiver be built? (and I do not mean
fabricating a custom IC. I mean with typical homebrew methods.)
Perhaps something for 80, 40, or 30 meters.

Are there any designs on the web?

I was wondering if a single NE602 could somehow be used as a
transceiver, or would it be better to use single transistors?

Jim
N8EE

945. Re: Wanted: OHMITE RF CHOKES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 13:24:29 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0202010524.6df38423@posting.google.com>
Source record: 46787
Cross-posted to: rec.radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

k5dh@raytheon.com (K5DH) wrote in message
news:<MUT58.124$Bd4.613@dfw-service2.ext.raytheon.com>...
> I need some Ohmite RF chokes for a project, one type Z-28 and
> two type Z-50. Anyone have some of these they can spare?
>
> 73,
> Dean, K5DH
> Visit my amateur radio web site at http://www.qsl.net/k5dh

What you restoring this time, Dean?

(...and see you next week.)

Jim
N8EE

946. Re: Wanted: OHMITE RF CHOKES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 13:37:16 UTC
From: k5dh@raytheon.com
Message-ID: <gSw68.148$Bd4.855@dfw-service2.ext.raytheon.com>
Source record: 46788
Cross-posted to: rec.radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

In article <8d5ec8a2.0202010524.6df38423@posting.google.com>,
jim.bolinger@lintek.aeroflex.com says...
>
>k5dh@raytheon.com (K5DH) wrote in message news:<MUT58.124$Bd4.613@dfw-se
>rvice2.ext.raytheon.com>...
>> I need some Ohmite RF chokes for a project, one type Z-28 and
>> two type Z-50. Anyone have some of these they can spare?
>>
>> 73,
>> Dean, K5DH
>> Visit my amateur radio web site at http://www.qsl.net/k5dh
>
>What you restoring this time, Dean?
>
>(...and see you next week.)
>
>Jim
>N8EE

Hi Jim,

Not restoring... building! I'm building a tube-type T/R switch
for full break-in operation with my BA gear. It's from the '68
edition of ARRL's "Single Sideband for the Radio Amateur".

73,
Dean W. Hemphill, K5DH -- Senior Technical Support Specialist
Raytheon Electronic Systems
RF & Microwave Test Engineering
Dallas, Texas
Phone: 972.344.2682 Email: k5dh@raytheon.com
Pager: 972.297.1398 FAX: 972.344.5201

947. Re: Smallest QRP Rig?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 14:33:29 UTC
From: PAC <choops@erinet.com>
Message-ID: <ZGx68.2161$Hu6.855548@typhoon.neo.rr.com>
Source record: 46789

Do a search on "QRP homebrew transceiver". Your search will return many possibilities...

"JLB" <jim.bolinger@lintek.aeroflex.com> wrote in message news:8d5ec8a2.0202010518.77348e88@posting.google.com...
> Just curious...
>
> How small can a QRP homebrew transceiver be built? (and I do not mean
> fabricating a custom IC. I mean with typical homebrew methods.)
> Perhaps something for 80, 40, or 30 meters.
>
> Are there any designs on the web?
>
> I was wondering if a single NE602 could somehow be used as a
> transceiver, or would it be better to use single transistors?
>
> Jim
> N8EE

948. Re: Smallest QRP Rig?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 15:08:15 UTC
From: Adam Weber <adam@home.email.ne.jp>
Message-ID: <3c5aaf76$0$27606$44c9b20d@news3.asahi-net.or.jp>
Source record: 46790

W1FB's Design Notebook has a 1.5W 40m transceiver circuit using an NE602 as the prod detector in the receiver section, and uses a 741 as the AF amp. The remainder is 6 discrete transistors. All fits on a board under 3" wide and just over 4" long (70x114mm). It was certainly "typical" homebrew methodology as far back as 1980, and probably earlier. [NO SMDs. <G>]

I think it would be possible to make that design more sophisticated in the given space, or to keep it simple and shrink the board area, but better for you to try, than for me...

BTW, does anyone familiar with the circuit know the purpose of the dead-end track running between the pins of U2? (the 741). In the artwork in my copy of the book, it constitutes a short-circuit for the higher end of R10...just wondering...

"JLB" <jim.bolinger@lintek.aeroflex.com> wrote in message
news:8d5ec8a2.0202010518.77348e88@posting.google.com...
> Just curious...
>
> How small can a QRP homebrew transceiver be built? (and I do not mean
> fabricating a custom IC. I mean with typical homebrew methods.)
> Perhaps something for 80, 40, or 30 meters.
>
> Are there any designs on the web?
>
> I was wondering if a single NE602 could somehow be used as a
> transceiver, or would it be better to use single transistors?
>
> Jim
> N8EE

949. Re: Smallest QRP Rig?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 15:40:49 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u5ldptdcm70j89@corp.supernews.com>
Source record: 46791

Even the Pixie kit from HSC is pretty small, it will fit in an Altoids tin INCLUDING the battery. The SMK-1 that NorCal kitted last year was a little bigger, but way better. On a 5.5x6 cm board they crammed separate VXO's for transmit and receive, 2 602's, a regulator, a few transistors, and a whole pile of resistors, caps and inductors. Except for the crystals and one toroid, it was all SMT. Some folks have put surface mount rigs (excluding the battery) into the tiny Altoids tins (4X6 cm). At FDIM, somebody was demonstrating a VXO in a DIP package, I think it is available for sale at Milestone Technologies, but I'm not sure. A version of the TiCK keyer is available on a 20x23mm board and the components stick up less than 3mm. So yeah, you can get pretty small.

..

"JLB" <jim.bolinger@lintek.aeroflex.com> wrote in message
news:8d5ec8a2.0202010518.77348e88@posting.google.com...
> Just curious...
>
> How small can a QRP homebrew transceiver be built? (and I do not mean
> fabricating a custom IC. I mean with typical homebrew methods.)
> Perhaps something for 80, 40, or 30 meters.
>
> Are there any designs on the web?
>
> I was wondering if a single NE602 could somehow be used as a
> transceiver, or would it be better to use single transistors?
>
> Jim
> N8EE

950. Need raytheon 2600 radar schematic/service info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 15:52:03 UTC
From: hexter@blazenet.net
Message-ID: <u5led3ql88674@corp.supernews.com>
Source record: 46792

Hi all,

The maggie in my 20 year old raytheon 2600 radar is fading fast, and
I want to replace it. But I would like to check a few other test points
before the summer season. So, need schematics etc. Can you help

reply to XXXXX@blazenet.net and of course the XXXXX will need to
be replaced by 1hest

TNX and 73

951. Re: Has anyone homebrewed an antenna for an HT with an SMA connector?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 15:56:58 UTC
From: "Joe Bramblett, KD5NRH" <kd5nrh-r.r.a.a@kd5nrh.net>
Message-ID: <74B9E96E6F5E9393.95590A9EB86954E4.316ACD42375503C5@lp.airnews.net>
Source record: 46793
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 1 Feb 2002 00:17:17 -0800, post_to_usenet@hotmail.com (Toni) wrote:

>I don't know if this is exactly what you are looking for, but I have
>homebrewed an antena for my TH-D7 that I regularly use for the outdoor
>events in my club and works reasonably well (much better than the
>supplied one):
<SNIP>
>Just another thing: Cut a 1/4 w. thin wire and put and 'eyelet?' on
>it, so that you can put it in the SMA before screwing the antenna on
>it. It will kind of work as a radial. It DOES make a difference with
>_any_ antena you are using!

I'm thinking about trying to add two radials to my D7A. I'm using a
flexible 19" whip, so what I'm considering is just soldering a couple
pieces of piano wire to a washer that just fits over the SMA stud.

Experimentation with copper wire formed into an eyelet got noticeable
improvements with only one radial.

Joe Bramblett, KD5NRH
kd5nrh@kd5nrh.net

952. SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 16:10:45 UTC
From: remnan@hotmail.com
Message-ID: <9832a498.0202010810.1fd95c9a@posting.google.com>
Source record: 46794

Hello,
I would appreciate if anyone can give me information regarding
availability of kit or pcb's for a universal SSB exciter using the
9MHz Filter Method. The Solid State Design for the Radio Amateur
(1995)had a project by TERRY A WHITE (KL71AK) which is of particulr
interest to me.

Cheers
R.Narayanan
VU2YAP

953. Re: bigger penis in 3 weeks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 16:27:21 UTC
From: Frank Todd <k3eko@nospam.nidhog.net>
Message-ID: <Ilz68.10834$rV.44229@rwcrnsc53>
Source record: 46795
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

Roger,

Send me a reply...I have lost your email address.

73

Frank K3EKO

"KC8JBO" <kc8jbo@alt.net> wrote in message news:a3e316taf1@pita.alt.net...
>
> "Another user" <at@btinternet.com> wrote in message
> news:a3cvj2$p36$1@paris.btinternet.com...
> > Will it work on my dipole hi from 40 to 80 over night
>
> LOL!!!!!! Only on verticals........LOL!!!!!!!!!
>
>
> > "KC8JBO" <kc8jbo@alt.net> wrote in message
> news:a2h93cmte0@pita.alt.net...
> > >
> > > <xphbtf@hotmail.com> wrote in message
> > > news:8UU28.5126$2V3.17109@news.uswest.net...
> > > > I found this interesting article on penis development:
> > > >
> > > > " Amazing excersise system to improve your sex life, increase your
> > > > penis size, and help to reduce the risk of prostate cancer"
> > > >
> > > > The cost is less than $40.00 and seems good value, please if you
> intend
> > on
> > > looking at this link,
> > > > I will let you know that it is non-porn, however there are a few
> > "graphic"
> > > pics.
> > > >
> > > > go to http://zlap.to/pd11
> > > > cya, Im off to bed now
> > > > zzz
> > >
> > > Hey Stagger Lee and Arf arf!, there's hope for you two to save your
> > > marriages yet, and you can afford to cash in $40 worth of your food
> > stamps.
>
>

>

954. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 17:01:12 UTC
From: PCS ELECTRONICS <info@pcs-nooo-spam-electronics-nospam.com>
Message-ID: <1012582880.993102@proxy.amis.net>
Source record: 46796
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

> He also paralleled multiple vari-cap diodes together to reduce the
> noise from these diodes, the idea being if noise is positive going on
> one diode, another diode could be negative going and the two help to
> cancel each other.

Since you've build the circuit, have you observed this to be actually true?
It doesn't sound right.

--
Best regards,
Marko - PCS Electronics

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tel +386 31 318 236

955. TR-3 power swith needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 17:52:49 UTC
From: Jim Rayburn <kc4bqk@home.com>
Message-ID: <RBA68.20723$gd.4592568@news2.nash1.tn.home.com>
Source record: 46697

Looking for a TR-3 power switch(volume).
Thanks for your help
'73
Jim
KC4BQK
email
kc4bqk@yahoo.com

956. Re: Smallest QRP Rig?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 18:14:46 UTC
From: faunt+u@panix.com
Message-ID: <mfr3d0l133d.fsf@panix2.panix.com>
Source record: 46698

I think there was a rig built in the small tube that connector pins come in. It's certainly possible to build a transceiver with one transistor.

This could probably be definitively answered on the QRP-L list.

73, doug

957. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 18:42:15 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C5AE265.12CE@pop.removethistomailme.net>
Source record: 46699
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

PCS ELECTRONICS wrote:
>
> > He also paralleled multiple vari-cap diodes together to reduce the
> > noise from these diodes, the idea being if noise is positive going on
> > one diode, another diode could be negative going and the two help to
> > cancel each other.
>
> Since you've build the circuit, have you observed this to be actually true?
> It doesn't sound right.
>

It's true about multiple diodes reducing noise, but I don't think Bill's explanation is correct. The idea is to use parallel combinations of low-capacitance diodes to reduce their equivalent resistance. That improves the tank-circuit Q, and anything that improves the Q will automatically improve noise performance.

The part about "negative and positive biases cancelling each other" is the reason why you put each individual pair of varactor diodes back-to-back. Since they can't both be forward-biased at once, they can't clip the RF voltage across the tank circuit, an effect Rohde previously showed to be bad for noise performance.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

958. Re: bigger penis in 3 weeks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 18:48:23 UTC
From: KC8JBO <kc8jbo@alt.net>
Message-ID: <a3eq3gaje0@pita.alt.net>
Source record: 46701
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

"Frank Todd" <k3eko@nospam.nidhog.net> wrote in message
news:Ilz68.10834$rV.44229@rwcrnsc53...
> Roger,
>
> Send me a reply...I have lost your email address.
>
> 73
>
> Frank K3EKO

Ok, man!

> "KC8JBO" <kc8jbo@alt.net> wrote in message
news:a3e316taf1@pita.alt.net...
> >
> > "Another user" <at@btinternet.com> wrote in message
> > news:a3cvj2$p36$1@paris.btinternet.com...
> > > Will it work on my dipole hi from 40 to 80 over night
> >
> > LOL!!!!!! Only on verticals........LOL!!!!!!!!!
> >
> >
> > > "KC8JBO" <kc8jbo@alt.net> wrote in message
> > news:a2h93cmte0@pita.alt.net...
> > > > <xphbtf@hotmail.com> wrote in message
> > > > news:8UU28.5126$2V3.17109@news.uswest.net...
> > > > > I found this interesting article on penis development:
> > > > >
> > > > > " Amazing excersise system to improve your sex life, increase your
> > > > > penis size, and help to reduce the risk of prostate cancer"
> > > > >
> > > > > The cost is less than $40.00 and seems good value, please if you
> > intend
> > > > on
> > > > looking at this link,
> > > > > I will let you know that it is non-porn, however there are a few
> > > "graphic"
> > > > pics.
> > > > >
> > > > > go to http://zlap.to/pd11
> > > > > cya, Im off to bed now
> > > > > zzz

> > > >
> > > > Hey Stagger Lee and Arf arf!, there's hope for you two to save your
> > > > marriages yet, and you can afford to cash in $40 worth of your food
> > > stamps.
> >
> >
> >
>
>

959. Re: Smallest QRP Rig?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 19:19:44 UTC
From: "Sverre Holm (LA3ZA)" <la3za@qsl.net>
Message-ID: <kTB68.6390$pd5.143923@news2.ulv.nextra.no>
Source record: 46700

One of the smallest tranceivers I know of, is the KnightSMiTe project. I am almost done building one from the instructions on http://www.knightlites.org/new_page_6.htm. From the web page:

"KnightSMiTe project, it is a Surface Mount technology tranceiver kit. The board measures 1" X 1-3/4". The circuit is
a much revised Pixie II, that is, a DC receiver and about 100 - 250mW output. It uses a 3.6864 MHz crystal. Our version has a Variable Crystal Oscillator and offset, so the received signal can be heard even when it zero beats the KnightSMiTe signal. Power is supplied by a 9V battery. "

Sverre Holm, LA3ZA
Asker, Norway (59.8N, 10.4E)
---
www.qsl.net/la3za

960. Re: Smallest QRP Rig?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 20:07:09 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0202011207.7aca575f@posting.google.com>
Source record: 46702

jim.bolinger@lintek.aeroflex.com (JLB) wrote in message
news:<8d5ec8a2.0202010518.77348e88@posting.google.com>...
> Just curious...
>
> How small can a QRP homebrew transceiver be built? (and I do not mean
> fabricating a custom IC. I mean with typical homebrew methods.)
> Perhaps something for 80, 40, or 30 meters.
>
> Are there any designs on the web?
>
> I was wondering if a single NE602 could somehow be used as a
> transceiver, or would it be better to use single transistors?
>
> Jim
> N8EE

I think the biggest consideration is how small components you
can get, and your own skill at shoehorning it into a small space.

Roy Lewellan has described some very small rigs in QST, and no,
they weren't just the very simplest. From the photos, he's
put some effort into getting it all very small.

You could throw together something extremely simple, but other
than the novelty of "the smallest rig", and people have been
doing this over the years, would you really be happy with the
performance? Unless you just want novelty, you probably
want a little more circuitry, and then the question is
getting it into a small space, rather than starting with
a simple rig.

One thing people wrote about thirty years ago was that
useability goes down as size decreases. So you can squeeze
the circuitry into a small space, but you may have problems
manipulating the knobs, or finding panel space for the
knobs and controls you need.

I think some of the most practical tiny equipment that I've
seen has been focused on rigs people have built to
take into the wilderness. Wes Hayward described the Micromountaneer
in QST years ago, and he intended it for this purpose. It
was small enough for his backpacking needs, but it was also
a useable piece of equipment. It was a direct conversion receiver,
and VXO controlled transmitter.

Michael VE2BVW

961. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 20:59:05 UTC
From: PCS ELECTRONICS <info@pcs-nooo-spam-electronics-nospam.com>
Message-ID: <1012597838.316807@proxy.amis.net>
Source record: 46705
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

That sounds more like it, yes, I was bothered by the explanation.

This thread was/is a good read, I plan to work on DDS in the
future myself.

--
Best regards,
Marko - PCS Electronics

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http://www.pcs-electronics.com
tel +386 31 318 236

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message
news:3C5AE265.12CE@pop.removethistomailme.net...
> PCS ELECTRONICS wrote:
> >
> > > He also paralleled multiple vari-cap diodes together to reduce the
> > > noise from these diodes, the idea being if noise is positive going on
> > > one diode, another diode could be negative going and the two help to
> > > cancel each other.
> >
> > Since you've build the circuit, have you observed this to be actually
true?
> > It doesn't sound right.
> >
>
> It's true about multiple diodes reducing noise, but I don't think Bill's
> explanation is correct. The idea is to use parallel combinations of
> low-capacitance diodes to reduce their equivalent resistance. That
> improves the tank-circuit Q, and anything that improves the Q will
> automatically improve noise performance.
>
> The part about "negative and positive biases cancelling each other" is
> the reason why you put each individual pair of varactor diodes
> back-to-back. Since they can't both be forward-biased at once, they
> can't clip the RF voltage across the tank circuit, an effect Rohde
> previously showed to be bad for noise performance.
>
> -- jm

962. Re: Moving 2.45GHz 1 meter - Pls help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 21:09:40 UTC
From: Gollywog <_eng@ilos.net>
Message-ID: <ouD68.685$8i2.21965@news2.mts.net>
Source record: 46703

Gollywog <_eng@ilos.net> wrote

<snip>
> I'm working on ideas for an antenna array for a remote control project. I
> need to move a 2.45GHz unmodulated carrier ...
<snip>

My main concern is stability in the phase shift introduced over the entire path from receive antenna to mixer. The processing approach I've worked out eventually "beats" the incoming sample stream (i.e. 5.5MHz alias wave) against a 9-point "reference wave" in a summation matrix and I use the resulting set of streams. The selection of these nine 32-bit floating point values allows "grand-total" phase shift to be canceled (over 360 degrees) at a precision far exceeding any practical level of stability. There are several gain, etc selections under DSP control and these changes include updating the reference wave from a table compiled during calibration. Other variations are going to be trouble.

I had worked out the whole receiving array strategy to use 75.55MHz (i.e. in the license free remote control band) but when I finally got around to reading the small print found "An antenna with a gain not exceeding that of a half wave dipole shall be used". Oops, I absolutely need directivity from the transmitter to minimize "multi-path" distortion resulting from reflections off nearby trees, buildings, etc. The current plan is to use a pair of dish or horn antennas on a rotating mast. One antenna emits 2.400GHz the other emits 2.47555 both locked to the same reference. I guess this is a single tone modulation (i.e. 75.55MHz) and an "upper side band with full carrier" mode emission. Or, if you like, a single tone modulated upper side band emission and a separate CW emission of the carrier frequency which will be needed at the receiver to recover the modulation. I plan to receive the 2.47555 at each of the 4 antennas of the current tetrahedron (i.e. pyramid shape), run it to the mixer board, and beat each against the 2.400GHz signal (from a 5th antenna on the top of the array) to get my four (phase related) 75.55MHz signals back. I then use one of these to reconstruct my 27.198MHz sample clock and I have my 9-point 5.5MHz alias wave from each for analysis by the DSP.

Suggestions appreciated,

Mike

********* \\\\lll//// *********
********** \ -- -- / **********
*********** (\@ @/) ***********
*** --oOOOo---(_)---oOOOo-- ***

963. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 21:33:54 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0202011333.b866b9a@posting.google.com>
Source record: 46704

remnan@hotmail.com (R.Narayanan) wrote in message
news:<9832a498.0202010810.1fd95c9a@posting.google.com>...

> I would appreciate if anyone can give me information regarding

> availability of kit or pcb's for a universal SSB exciter using the

> 9MHz Filter Method. The Solid State Design for the Radio Amateur

> (1995)had a project by TERRY A WHITE (KL71AK) which is of particulr

> interest to me.

There aren't any. Nor were there any the first time
you asked.

The project in question is old, and may be difficult
to reproduce. You may want to investigate something
a little more recent.

Laura Halliday VE7LDH "Que les nuages soient notre
Grid: CN89lg pied a terre..."
ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

964. Re: Moving 2.45GHz 1 meter - Pls help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-01 22:31:12 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <7gF68.10492$sU.1824388@news6-win.server.ntlworld.com>
Source record: 46706

> My main concern is stability in the phase shift introduced over the entire
> path from receive antenna to mixer. The processing approach I've worked
out
> eventually "beats" the incoming sample stream (i.e. 5.5MHz alias wave)
> against a 9-point "reference wave" in a summation matrix and I use the
> resulting set of streams. The selection of these nine 32-bit floating
point
> values allows "grand-total" phase shift to be canceled (over 360 degrees)
at
> a precision far exceeding any practical level of stability. There are
> several gain, etc selections under DSP control and these changes include
> updating the reference wave from a table compiled during calibration.
Other
> variations are going to be trouble.
>
> I had worked out the whole receiving array strategy to use 75.55MHz (i.e.
in
> the license free remote control band) but when I finally got around to
> reading the small print found "An antenna with a gain not exceeding that
of
> a half wave dipole shall be used". Oops, I absolutely need directivity
from
> the transmitter to minimize "multi-path" distortion resulting from
> reflections off nearby trees, buildings, etc. The current plan is to use a
> pair of dish or horn antennas on a rotating mast. One antenna emits
2.400GHz
> the other emits 2.47555 both locked to the same reference. I guess this is
a
> single tone modulation (i.e. 75.55MHz) and an "upper side band with full
> carrier" mode emission. Or, if you like, a single tone modulated upper
side
> band emission and a separate CW emission of the carrier frequency which
will
> be needed at the receiver to recover the modulation. I plan to receive the
> 2.47555 at each of the 4 antennas of the current tetrahedron (i.e. pyramid
> shape), run it to the mixer board, and beat each against the 2.400GHz
signal
> (from a 5th antenna on the top of the array) to get my four (phase
related)
> 75.55MHz signals back. I then use one of these to reconstruct my 27.198MHz
> sample clock and I have my 9-point 5.5MHz alias wave from each for
analysis
> by the DSP.
=====

Re antennas for this job , have a look at QST - Feb 2002 ,page 32 . Antenex ,indoor 2.4 GHz antenna.
www.antenex.com

Frank gm0csz.kn6wh@ntlworld.com

965. Dentron GL-1000 need help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-02 01:36:49 UTC
From: ni4l <ni4l@charter.net>
Message-ID: <3C5B42B1.A1A3BCD3@charter.net>
Source record: 46707

Hi
I have picked up a orginial no mods Gl-1000 it has a plate voltage of
1100
volts on the plate. the swr between the rig and amp was checked 1:5:1
have a mn2000 between icom 751 and amp but since swr was ok just left in
thru mode.
when i flip swith to current it does not move.
when i flip to rel output and tune on it plus the adj in back for rel
output it shows around 4-500 on top scale but amp is producing no output
have drake w4 in line after amp shows 0 output. was checking on 3.919
since it is the only resonate wire antenna i have up.
any help on this would be greatly appreciated.
chris NI4L

966. Knobs for HT-40 Hallicrafters XMTR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-02 03:40:04 UTC
From: Sparks W4EAS <sparksw4eas@mindspring.com>
Message-ID: <3C5B5F94.24A9@mindspring.com>
Source record: 46708

Looking for a set of knobs or at least the two large tune and load
controls for a Hallicrafters HT-40 XMTR 73 Sparks W4EAS

967. Re: Wanted: OHMITE RF CHOKES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-02 04:52:38 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0202012052.5f29af7a@posting.google.com>
Source record: 46709
Cross-posted to: rec.radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

k5dh@raytheon.com (K5DH) wrote in message
news:<gSw68.148$Bd4.855@dfw-service2.ext.raytheon.com>...
> In article <8d5ec8a2.0202010524.6df38423@posting.google.com>,
> jim.bolinger@lintek.aeroflex.com says...
> >
> >k5dh@raytheon.com (K5DH) wrote in message news:<MUT58.124$Bd4.613@dfw-se
> >rvice2.ext.raytheon.com>...
> >> I need some Ohmite RF chokes for a project, one type Z-28 and
> >> two type Z-50. Anyone have some of these they can spare?
> >>
> >> 73,
> >> Dean, K5DH
> >> Visit my amateur radio web site at http://www.qsl.net/k5dh
> >
> >What you restoring this time, Dean?
> >
> >(...and see you next week.)
> >
> >Jim
> >N8EE
>
> Hi Jim,
>
> Not restoring... building! I'm building a tube-type T/R switch
> for full break-in operation with my BA gear. It's from the '68
> edition of ARRL's "Single Sideband for the Radio Amateur".
>
The schematic does mention the inductance of those chokes,
though it's the parts list that specifies the Ohmite.

The two in the power line, the Z-50's, are listed as 7uH.
Since that's just building up a whole power line filter,
you might just try one of those power line filters that have
two terminals on one end, and a jack for a three-prong cord
at the other. It takes care of the chokes, and the worry about
getting capacitors for connecting across the power line.

Or, find a scrap switching supply, like from a computer,
and grab the line filter components out of that. There's
bound to be some sort of coil, though the ones I've seen
seen usually have some sort of bifilar wound coil, and some
capacitors that go across the AC line.

The other choke, the Z-28, is listed as having 21uH. Find one that is in the general range and enough current rating, and you should be fine. Try one of those moulded chokes, though I don't know about their current rating.

I can picture a chart listing those Ohmite chokes, and their inductance, but I can't remember where I saw it. There wasn't anything special about them, as far as I know, other than in an era where you'd tend to see 2.5mH values when you saw chokes, the Ohmite series was a range of inductors, that just happened to associate a given inductor to the ham band, in MHz, where it might be most appropriate.

You could probably just wind some coils of basically the same inductance, and get away with it.

Or try one of those 2.5mH chokes, after all, they worked in a lot of other items of that era, as plate chokes.

Michael VE2BVW

968. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-02 05:03:22 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3C5B7319.90E9229B@sympatico.ca>
Source record: 46710
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Built but I haven't tested it for phase noise.

PCS ELECTRONICS wrote:

> > He also paralleled multiple vari-cap diodes together to reduce the
> > noise from these diodes, the idea being if noise is positive going on
> > one diode, another diode could be negative going and the two help to
> > cancel each other.
>
> Since you've build the circuit, have you observed this to be actually true?
> It doesn't sound right.
>
> --
> Best regards,
> Marko - PCS Electronics
> --
> Turn your PC into a FM radio station!
> http://www.pcs-electronics.com
> tel +386 31 318 236

969. Re: Wanted: B & W Miniductors 3003 and 3016

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-02 05:08:02 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0202012108.41cf71df@posting.google.com>
Source record: 46711
Cross-posted to: rec.radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

k5dh@raytheon.com (K5DH) wrote in message
news:<5zZ58.134$Bd4.548@dfw-service2.ext.raytheon.com>...
> Subject sez it all... need one of each...
>
> 73,
> Dean, K5DH
> Visit my amateur radio web site at http://www.qsl.net/k5dh

Again, there's nothing magical about those coils.

The 3003, according to a chart I found, is a .5 inch diameter coil, 2
inches long, with 16 turns per inch.

The 3016 is a 1 inch diameter coil, 3 inches long, with 32 turns
per inch.

Oops, I see the parts list even specifies that information.

So for the 3003, find some sort of coil form half an inch in diameter
and 1.5 to 2 inches long. Get some wire. Since the parts list
says 23 turns, then fit that into a length bit longer than 1 inch.

For the 3016, find something an inch in diameter, maybe 1 inch long.
The parts list specifies 19 turns. So wind it so it fits into
the about the right length.

Michael VE2BVW

970. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-02 05:24:42 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3C5B781A.553EDE5A@sympatico.ca>
Source record: 46712
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

From "Designing Low-Phase-Noise Oscillators", Rhode, QEX 1994

We can improve the noise performance of a VCO by using multiple tuning
diodes in the antiparallel arrangement of Fig 15. The improvement arises
from two causes. First, the individual parallel diodes each have a smaller
capacitance value than a single diode would need. This helps because
small-cpapacitance diodes have less noise (lower equivalent noise resistances)
than larger-capacitance diodes, due to the fabrication technology. Second,
because the noise voltages from the individual dioes are uncorrelated, they do
not directly sum together. Thus the effective noise is less than that of a single
diode. While this scheme increases the cost of the circuit, it can reduce the
diode noise contribution by as much as 15 or 20 dB compared to using a single
diode.

(sorry, I can't include Fig 15. but it shows 2 sets of 6 pairs of BB809 diodes)

Regarding Q, from the same paper.

When we extend our design to become a VCO, by adding a tuning diode, we must also
consider the phase noise introduced by that diode. Contrary to what you may have
read elsewhere, this noise is not due solely to Q reduciton from the added diode.
The diode itself introduces noise that modulates the VCO frequency.
The easiest way to analyze this noise is to treat the diode's noise contributions
as that of an equivalent resistance R. This resistor can then be considered to be
generating the thermal noise voltage that any resistance exhibits:
Vn = sqrt (4 KToR deltaf)

Rhode not me.

The equivalent resistance is solely to model the noise not the loading effect
on Q. (Not to say that the diode doesn't alter Q, just that the purpose of the
equivalent resistance is to model the noise.)

Bill Kirkland
VE3JHU.

John Miles wrote:

> PCS ELECTRONICS wrote:
> >
> > > He also paralleled multiple vari-cap diodes together to reduce the
> > > noise from these diodes, the idea being if noise is positive going on
> > > one diode, another diode could be negative going and the two help to
> > > cancel each other.
> >
> > Since you've build the circuit, have you observed this to be actually true?

> > It doesn't sound right.
> >
>
> It's true about multiple diodes reducing noise, but I don't think Bill's
> explanation is correct. The idea is to use parallel combinations of
> low-capacitance diodes to reduce their equivalent resistance. That
> improves the tank-circuit Q, and anything that improves the Q will
> automatically improve noise performance.
>
> The part about "negative and positive biases cancelling each other" is
> the reason why you put each individual pair of varactor diodes
> back-to-back. Since they can't both be forward-biased at once, they
> can't clip the RF voltage across the tank circuit, an effect Rohde
> previously showed to be bad for noise performance.
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

971. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-02 05:32:37 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3C5B79F5.C85AA9D7@sympatico.ca>
Source record: 46713
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I suggest you read the QEX paper Designing Low-Phase-Noise Oscillators,
October 1994.

From a later paper
A High-Performance Hybrid Frequency Synthesizer, QST March 1995

A key factor in the synthesizer's relative simplicity is that it uses a single,
wide range LO VCO rather than several switched VCOs. Achieving low phase noise
with this arrangement requires taht the loop's tuning diodes, and therefore the
associated loop-filter op amp, operate at a considerably higher voltage than
the system's 5 and 10-V buses.

He uses +28 Vcc and generates a small negative voltage for Vee off of the PLL
chip for the OP AMP power rails

Bill Kirkland
VE3JHU

PCS ELECTRONICS wrote:

> That sounds more like it, yes, I was bothered by the explanation.
>
> This thread was/is a good read, I plan to work on DDS in the
> future myself.
>
> --
> Best regards,
> Marko - PCS Electronics
> ----------
> Turn your PC into a FM radio station!
> http://www.pcs-electronics.com
> tel +386 31 318 236
>
> "John Miles" <jmiles@pop.removethistomailme.net> wrote in message
> news:3C5AE265.12CE@pop.removethistomailme.net...
> > PCS ELECTRONICS wrote:
> > >
> > > > He also paralleled multiple vari-cap diodes together to reduce the
> > > > noise from these diodes, the idea being if noise is positive going on
> > > > one diode, another diode could be negative going and the two help to
> > > > cancel each other.
> > >
> > > Since you've build the circuit, have you observed this to be actually
> true?
> > > It doesn't sound right.

> > >
> >
> > It's true about multiple diodes reducing noise, but I don't think Bill's
> > explanation is correct. The idea is to use parallel combinations of
> > low-capacitance diodes to reduce their equivalent resistance. That
> > improves the tank-circuit Q, and anything that improves the Q will
> > automatically improve noise performance.
> >
> > The part about "negative and positive biases cancelling each other" is
> > the reason why you put each individual pair of varactor diodes
> > back-to-back. Since they can't both be forward-biased at once, they
> > can't clip the RF voltage across the tank circuit, an effect Rohde
> > previously showed to be bad for noise performance.
> >
> > -- jm

972. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-02 06:04:13 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3C5B815D.A4ACD16A@sympatico.ca>
Source record: 46715

Solid State Design For the Radio Amateur pre-dates 1982.
I got my first copy before I started University in 82. My 2nd copy
is much more recent and I don't think anything has changed.

The circuit I believe you are referring to could be done with the "ugly"
method. It is simple enough. Good luck getting an MC1496G, this is the
standard MC1496 mixer/modulator in a metal can. You will more likely find
a 14-pin dip part. Even Philips made the MC1496 at one time. Try Mouser, they listed 2
substitutes. (Listed in
"Dan's Small Parts for $1.25.
http://www.fix.net/dans.html/

40673's used in the IF Amp are long out of production.

Wes Hayward has a good SSB/CW transceiver in QRP Classics, pg 153.
I've built several versions of the circuits in his design and they work fine.

If you bump the LO drive to say 7 dBm you could use a Level-7 Minicircuit
mixer. They have several in the sub-$5 class which they advertise in RF Mags.

The crystal filter is available from "International Radio"
Toroids are available from Amidon (check the ARRL handbook)

Bill Kirkland
VE3JHU

Laura Halliday wrote:

> remnan@hotmail.com (R.Narayanan) wrote in message
news:<9832a498.0202010810.1fd95c9a@posting.google.com>...
>
> > I would appreciate if anyone can give me information regarding
>
> > availability of kit or pcb's for a universal SSB exciter using the
>
> > 9MHz Filter Method. The Solid State Design for the Radio Amateur
>
> > (1995)had a project by TERRY A WHITE (KL71AK) which is of particulr
>
> > interest to me.
>
> There aren't any. Nor were there any the first time
> you asked.
>
> The project in question is old, and may be difficult
> to reproduce. You may want to investigate something
> a little more recent.

>
> Laura Halliday VE7LDH "Que les nuages soient notre
> Grid: CN89lg pied a terre..."
> ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

973. Re: Dentron GL-1000 need help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-02 06:05:17 UTC
From: ni4l <ni4l@charter.net>
Message-ID: <3C5B819D.B3D82D6E@charter.net>
Source record: 46714

i took the relay out and cleaned it really good also checked to make
sure that no shorts giong to pl259s. i checked for any loose connections
found none. Its like when you key it up and apply power you can just
barley see the output meter after the amp barely move. with the amp off
talking thru it have no problem getting out. Can press relay when i am
receiving and receive goes away. Its not letting the power come out of
the amp.Is there any thing else i could check?
thanks for your time

ni4l wrote:
>
> Hi
> I have picked up a orginial no mods Gl-1000 it has a plate voltage of
> 1100
> volts on the plate. the swr between the rig and amp was checked 1:5:1
> have a mn2000 between icom 751 and amp but since swr was ok just left in
> thru mode.
> when i flip swith to current it does not move.
> when i flip to rel output and tune on it plus the adj in back for rel
> output it shows around 4-500 on top scale but amp is producing no output
> have drake w4 in line after amp shows 0 output. was checking on 3.919
> since it is the only resonate wire antenna i have up.
> any help on this would be greatly appreciated.
> chris NI4L

974. Ten-Tec Scout 555 band-switching project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-02 08:24:27 UTC
From: googlyelmo@earthlink.net
Message-ID: <3C5BA230.9E555346@earthlink.net>
Source record: 46716

I have been thinking about constructing a band-switching box for the modules
my Scout uses, really since a month or two after I bought it in 1998. I love
this little rig, but I am getting mighty tired of swapping the band
modules in and out, in and out. I am surprised no one has published a project
for a switch box for this rig in the almost eight years the Scout has been
in production. What I have planned so far is an
ABS/plastic or aluminum case, large enough to accomodate 6 modules (I
don't use my Scout on 160, 17, or 12), complete with a switch and
indicator lights.

I keep meaning to call Ten-Tec's technical support
department to find out about connectors and ask their advice,
but I never seem to make it before they go home @ 4 p.m.
Eastern. I need to know what the type of connectors used in the modules

are called (esp. the edge-card, but the barrel/coax ones as well), and the
size, ratings, and where I can get them.

The modules will connect to the box, with one flat-ribbon cable going
from the box to the module socket on the Scout. Theew will be a switch to
select the band, and a lighted indicator for the band as well. I need to figure out
how to do this so that the job is reliable, durable, and looks nice.

Other questions and issues I have with this project are: what type of selector
switch (e.g. rotary ceramic, electronic, multiple push buttons, etc.) to

use, and the best wiring arrangement for six modules?; the best case material?;
any issues with grounding, cable lengths, heat, etc.?

So, that's my project plan. Not terribly complicated, but I do have a
few things to work out. If you have any suggestions addressing the
questions I have raised above, I would be grateful to hear them. Any
other comments or observations are quite welcome too. And BTW, has
anyone else built a box like this for this rig before, or come up with
another good band-switching scheme for the Scout and its modules? Once I

get the project finally thought out I will begin building, and post pictures and an account of my progress on the web. Thanks.

Will, KD7BFX

975. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-02 09:28:01 UTC
From: n2cqr@clix.pt
Message-ID: <3c5bb00b.1026945@news.clix.pt>
Source record: 46717

On 1 Feb 2002 08:10:45 -0800, remnan@hotmail.com (R.Narayanan) wrote:

>Hello,
>I would appreciate if anyone can give me information regarding
>availability of kit or pcb's for a universal SSB exciter using the
>9MHz Filter Method. The Solid State Design for the Radio Amateur
>(1995)had a project by TERRY A WHITE (KL71AK) which is of particulr
>interest to me.
>
>Cheers
>R.Narayanan
>VU2YAP

OM: Why not try building it with the now popular Manhattan method (copper clad board with islolation pads). I am building an SSB exciter for 17 meters using this method. My rig has the filter at 5.173 Mhz (I had the crystals for a filter at that freq.)

Please tell us more about your project.

73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 15.7 W
http://planeta.clix.pt/n2cqr

976. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-02 10:56:19 UTC
From: PCS ELECTRONICS <info@pcs-nooo-spam-electronics-nospam.com>
Message-ID: <1012647387.153278@proxy.amis.net>
Source record: 46719
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Great, Bill, these two posts are well worth saving and using
some day. Appreciated.

How is the PCB for the DDS coming along? Perhaps I could
help there.

--
Best regards,
Marko - PCS Electronics

Turn your PC into a FM radio station!
http://www.pcs-electronics.com
tel +386 31 318 236

"Bill Kirkland" <kirklandb@sympatico.ca> wrote in message
news:3C5B79F5.C85AA9D7@sympatico.ca...
> I suggest you read the QEX paper Designing Low-Phase-Noise Oscillators,
> October 1994.
>
> From a later paper
> A High-Performance Hybrid Frequency Synthesizer, QST March 1995
>
> A key factor in the synthesizer's relative simplicity is that it uses a
single,
> wide range LO VCO rather than several switched VCOs. Achieving low phase
noise
> with this arrangement requires taht the loop's tuning diodes, and
therefore the
> associated loop-filter op amp, operate at a considerably higher voltage
than
> the system's 5 and 10-V buses.
>
> He uses +28 Vcc and generates a small negative voltage for Vee off of the
PLL
> chip for the OP AMP power rails
>
> Bill Kirkland
> VE3JHU
>
> PCS ELECTRONICS wrote:
>
> > That sounds more like it, yes, I was bothered by the explanation.
> >
> > This thread was/is a good read, I plan to work on DDS in the

> > future myself.
> >
> > --
> > Best regards,
> > Marko - PCS Electronics
> > --
> > Turn your PC into a FM radio station!
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> > tel +386 31 318 236
> >
> > "John Miles" <jmiles@pop.removethistomailme.net> wrote in message
> > news:3C5AE265.12CE@pop.removethistomailme.net...
> > > PCS ELECTRONICS wrote:
> > > >
> > > > > He also paralleled multiple vari-cap diodes together to reduce the
> > > > > noise from these diodes, the idea being if noise is positive going
on
> > > > > one diode, another diode could be negative going and the two help
to
> > > > > cancel each other.
> > > >
> > > > Since you've build the circuit, have you observed this to be
actually
> > true?
> > > > It doesn't sound right.
> > > >
> > >
> > > It's true about multiple diodes reducing noise, but I don't think
Bill's
> > > explanation is correct. The idea is to use parallel combinations of
> > > low-capacitance diodes to reduce their equivalent resistance. That
> > > improves the tank-circuit Q, and anything that improves the Q will
> > > automatically improve noise performance.
> > >
> > > The part about "negative and positive biases cancelling each other" is
> > > the reason why you put each individual pair of varactor diodes
> > > back-to-back. Since they can't both be forward-biased at once, they
> > > can't clip the RF voltage across the tank circuit, an effect Rohde
> > > previously showed to be bad for noise performance.
> > >
> > > -- jm
>

977. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-02 11:06:27 UTC
From: la8ak.xnd@online.no
Message-ID: <3c5b25fc.463590604@news.online.no>
Source record: 46718

On 1 Feb 2002 marsgal42@hotmail.com (Laura Halliday) wrote:

>> I would appreciate if anyone can give me information regarding
>
>> availability of kit or pcb's for a universal SSB exciter using the
>
>> 9MHz Filter Method. The Solid State Design for the Radio Amateur
>
>> (1995)had a project by TERRY A WHITE (KL71AK)
>
>There aren't any. Nor were there any the first time you asked.
>
>The project in question is old, and may be difficult
>to reproduce. You may want to investigate something
>a little more recent.
>
such was more interesting 30 years ago, some kits were sold by VHF
communications, but I doubt you will find it today. DJ8ES showed
around 1990 some inexpensive solutions, but I don't think a kit was
ever sold commercially

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

978. Use of Relays

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-02 13:43:10 UTC
From: Harry Williams <harry.w.williams@syntegra.com>
Message-ID: <3C5BED36.BD9F608B@syntegra.com>
Source record: 46720

I am constructing a matching network for a vertical and will need to use some relays to control the matching configuration. I have 2 relays that have a 24VAC coil. It appears that the relays pull just fine using 12VDC. Can I use CD to energize a relay whose coil specifies AC? In general is there a preference, DC or AC, in this type of application? I guess I am thinking of induced noise during receive if I use AC but maybe that is not an issue since most of the old dowkey coaxial relays used 110VAC coil. Any thoughts on this would be appreciated.

Thanks,
Harry - W0PIY

979. Re: Dummy needs help w/grid dip meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-02 14:26:27 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c5bf637$0$17654@echo-01.iinet.net.au>
Source record: 46721

A couple of turns may be effectively shorting the antenna feedline at 7 MHz. This would give a very flat dip which may be difficult to pick up. You could try transforming the impedance via a toroid with quite a few turns on the secondary (to antenna) and only a few turns on the primary feeding a link also with with a few turns which is coupled to the GDO. They generally dont have a flat reading across the band because they may tune an octave or more for each band. However a resonance is generally quite sharp.

Richard

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
news:3c4f3f70.11880145@news.freeserve.net...
> On Sun, 20 Jan 2002 16:17:08 -0500, WebRat@wehackz.org wrote:
>
> >Hi all,
> >
> >I am in possession of a grid dip meter that I have no idea how to
> >operate! I would RTM, but, there's no M to R ;) The only other ham I
> >know is a off-the-shelf 2-meter only kinda fella. He tried, but
> >doesn't know much more than I do about the thing.
> >
> >If I understand what I've found about it, here's what I do.
> >
> >1. install a coil to oscillate in the desired range e.g., 3.7 MHz -
> >8.0 MHz for 40Meters
> >2. after warm-up, adjust the output so that the meter reads at a
> >setpoint on the scale.
> >3. place the coil near the circuit under test (2 turns of #22 solid
> >wire across the feedline of my cut-freq 7.150MHz dipole in this case)
> >4. vary the freq control until there is a large change in the meter
> >reading.
> >
> >Here's the problem; the thing has several large fluctuations across
> >the range of the selected coil, none of which seem to be harmonics of
> >7.15 MHz.
> >
> >The VSWR meter shows me 1.2:1 at 7.15MHz, so the antenna is properly
> >tuned, or the swr meter is lying.
> >Anyone got some help for a digital dummy attempting to climb into a
> >vaccuum tube world?
> >
> I found this article on GDO's, perhaps it will help ...
> http://www.qsl.net/iz7ath/web/02_brew/15_lab/02_dipper/pag01_eng.htm
> and I thought of you ;-)
> hth Mike W, G8NXD M3MSM qthr

980. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-02 14:27:07 UTC
From: Win Hill <whill@mediaone.net>
Message-ID: <3C5BF5C3.4D8B2288@mediaone.net>
Source record: 46722
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Miles wrote:
>
> Clifton T. Sharp Jr. wrote:
>>
>> I steadfastly refused to go past 3.11 myself; I refused Win9x entirely.
>> Eventually my nephew shamed me into converting to linux, where I've been
>> happy ever since.
>>
>> Epilogue: then the wife comes home needing Win98 for her real-estate
>> applications. *sigh*
>
> The ironic thing is that even the beta releases of Win95 were so much
> better than Win 3.1x it's not even funny. Most professional DOS/Windows
> developers (like myself) installed the spring '95 beta release of
> Chicago and never looked back. You and Mike, on the other hand, appear
> to have barricaded yourself in a roomful of snakes just to avoid dealing
> with the roomful of worms next door. :)
>
> It's perfectly reasonable to go with Linux over Win9x if that's your
> thing, but using Windows 3.1 in 2002 just to be contrary is, to say
> the least, self-defeating.

Mike, you could at least graduate to Windows-for-Workgroups,
that was the final improved Windows 3 version! Actually, my
suggestion is to get serious and jump straight to Windows 2000
with a set of new computer hardware. $650 will get you a new
box with an everything-on-the-board mobo with a say 1.5GHz AMD
Athlon and 512M of DDR memory: one screaming Spice machine.
Add $150 for a hard drive plus $150 more in tax to Microsoft...

OK, maybe Linux doesn't sound so bad, keep that last $150 and
save some more money by just getting 256M of DDR ram.

- Win

981. Re: Use of Relays

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-02 15:14:26 UTC
From: brokebob@aol.com
Message-ID: <20020202101426.02827.00000549@mb-cc.aol.com>
Source record: 46723

For your application the AC relays will work just fine with DC applied. The voltage required to pull them in needs to be checked. 12 VDC might be too much and burn the coils out if on for long periods of time. Try series resistor equal to the coil DC resistance.

Bob
brokebob@aol.com (broke=not working, retired=not working, retired=broke)

982. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-02 17:15:20 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3C5C1EA8.D9623DF7@sympatico.ca>
Source record: 46724
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

You're welcome. I purchased the QEX CD collection, I highly recommend it.
As for the PCB I built it a year or so ago. My problem is that I have too many things on the go. Moving from an apartment to house caused quite an interruption.
The tricky part I found is writing the micro-controller code. Coming up with 32-bit numbers to program the DDS with and cover the tuning range from 70 to 100 is slowing me down. If the micro does all the calculations it involves doing divisions. As I am writing in assembler this gets to be "fun".
I actually got the code working but then I moved. I have to get back to it and interface a shaft encoder. Here I am thinking of using a mouse. I took one apart
and it looks like a crude shaft encoder. For tuning purposes we don't need great angular resolution, just lots of increments over 360 deg.

Anyone taken a PS-2 mouse apart and understand the interface to the PC?

I still have to work on the rest of the radio as well :).

Bill
VE3JHU

PCS ELECTRONICS wrote:

> Great, Bill, these two posts are well worth saving and using
> some day. Appreciated.
>
> How is the PCB for the DDS coming along? Perhaps I could
> help there.
>
> --
> Best regards,
> Marko - PCS Electronics
> ----------

983. ARNewsline 1277 - Feb 1 2002

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-02 18:25:51 UTC
From: radionews@aol.com
Message-ID: <20020202132551.28179.00001331@mb-ba.aol.com>
Source record: 46725

Amateur Radio Newsline™ Report 1277 – February 1, 2002

Amateur Radio Newsline report number 1277 with a release date of Friday, February 1st, 2002 to follow in 5-4-3-2-1.

The following is a Q-S-T.

The President of the United States speaks to hams in Florida and is ham radio seeing a second Solar Max? These stoies are first on amateur Radio Newsline report number 1277 coming your way right now.

(Billboard Cart Here)

**

BREAKING NEWS: PRESIDENT BUSH COMES TO HAM RADIO

The President of the United States has come to ham radio. Bill Burnett, KT4SB, has the details:

--

President George W. Bush has taken to the ham radio airwaves. This, to thank the Florida Amateur Radio community for being ready to serve the public when it is needed.

The President’s comments were made during a stopover the morning of January 31st at the Volusia County Fire Services and Training Center near Daytona. Around 9:15 AM Eastern Time, President Bush checked in to the Northern Florida Amateur Radio Emergency Service Net on 3.950 MHz using a portable station set up John Schmidt, AF4PU. Then the President made these remarks to the 40 or so stations listening to the net:

--

President George W. Bush:

"I want to thank all the volunteers who help make sure that Florida is prepared for any kind of emergency. I also want to assure you that your Federal government is doing everything we can to make sure that there is not an emergency--starting with unleashing the mighty U.S. military overseas to bring evil ones to justice. But should there be a need for a response, I want to thank you all for helping our communities be prepared. And finally, I want to tell you--we are lucky to be Americans and may God continue to bless this great land of ours. Thank you very much."

--

Needless to say the net members were delighted to have the President of the United States address them. More important, hams nationwide can now be sure that President Bush knows that Amateur Radio operators are ready to serve whenever he, and the nation, needs to call on them for help.

In Miami, I'm Bill Burnett, KT4SB, reporting for the Amateur Radio Newsline.

--

The complete story is on the web at
http://firstcoastcommunity.jacksonville.com/northfloridaamateurradiosocietynofars (Tnx NU4F, CQ Magazine)

**

HAM RADIO SCIENCE: TWO SOLAR MAXIMUMS THIS SEASON

In case you are wondering why the current solar cycle is still providing such amazing VHF and UHF DX, one researcher may have the answer. He says that the current cycle appears to be having a second peak and that this is really not very unusual. Henry Feinberg, K2SSQ, looks at the scientist and his latest data.

--

The most recent and ongoing Solar Maximum -- or Solar Max -- theoretically crested in mid-2000. Sunspot counts were higher than they had been in 10 years, and solar activity was intense. One remarkable eruption on July 14, 2000 caused brilliant auroras as far south as Texas. But after that, sunspot counts slowly declined and the Sun was relatively quiet for month-long stretches. Most scientists said that the Solar Max was over. But was it?

Now, as 2002 unfolds, the National Aeronautics and Space Administrations solar foorecasters say that it looks as if the Solar Max is back with us again. The Sun is again peppered with spots, eruptions are frequent and hams notice that the VHF DX keeps rolling in.

Why is this happening? Well David Hathaway, a solar physicist at the NASA Marshall Space Flight Center in Huntsville Alabama has one theory. Hathaway says that the current solar cycle appears to be double-peaked, and the second peak has arrived.

--
Hathaway Audio Here
In-Q: We have seen other cycles...
Out-Q: ...define this maximum
--

Scientists track solar cycles by counting sunspots and Hathaway is an expert forecaster of sunspot numbers. He says that sunspot counts peaked in 2000 some months earlier than we expected. He says that the subsequent dip toward solar minimum seemed premature and before long, sunspot counts reversed course and began to climb toward a second maximum that now appears to be only a few percent smaller than the first.

--
Hathaway Audio Here
In-Q: Its a bigger than average...
Out-Q: ...smaler than 19, 21 and 22.
--

Hathaway notes that there is a widespread misconception that solar activity varies every eleven years like a pure sinusoidal wave. It isn't. He says that solar activity is chaotic and there can be more than one peak in any given period. Translated for ham radio: Enjoy the VHF DX while you can.

For the Amateur Radio Newsline, Henry Feinberg, K2SSQ.

--

Hathaway says that the Solar Max eleven years ago was much the same as this one. The first peak arrived in mid-1989 followed by a smaller maximum in early 1991. And if you are interested in hearing more about this interesting phenomena from David Hathaway its as easy as taking your web browser over to www.rainreport.com. Or you can call on the phone to area code 847-827-7246. (NASA, RAIN)

**

HAM RADIO IN SPACE: HF ANTENNA INSTALLED ON ISS

High Frequency ham radio operations from the International Space Station could be on the not to distant horizon. This, after a successful space walk on January 25th to install another antenna on the orbiting outpost. Amateur Radio Newsline's Roy Neal, K-6-D-U-E, has the details.

--

The spacewalkers have had another good day in space. On Friday the 25th of January, Cosmonaut Yuri Onufrienko, RK3DUO and Astronaut Dan Bursch, KD5PNU, successfully mounted a second ham radio antenna near a docking port amidships on the International Space Station. It is made of flexible tape and is similar to but longer than another antenna installed on January 14th. That one tunes both VHF and UHF frequencies. The new antenna will tune HF frequencies.

ARISS Board Chairman Fran Bauer, KA3HDO, says it definitely will work on ten meters and may even be made to work on 15 and 20 meters. BUT right now there is no gear on board to handle those frequencies. Experiments using the lower frequencies are on the list of futures for ARISS but no timetable has been assigned to design and build them.

Owen Garriott, W5LFL, the first man to operate ham equipment in space, once prophesied that a five watt transmitter in orbit might well be heard simultaneously world wide. The great number of hams with good stations on the lower frequencies also makes them enticing to ARISS. It's a safe bet that serious consideration now is being given to expedite such a project. Once a station is sent up, the antenna will be waiting.

The new antenna is the second of four to be installed on board the space station. No timetable has been announced for the final installation. All of

these amateur antennas were built by Italy, tested and qualified in the US, to fit ports built by Russia, as befits the international nature of the ISS.

For the Amateur Radio Newsline, Roy Neal, K6DUE

--

Installation of the 2.5-meter long flexible tape antenna involved not only the mechanical deployment but routing cables and establishing the R-F connection as well. (ARISS)

**

HAM RADIO IN SPACE: THAT ANNOYING SATELLITE IS OFF 2 METERS

An annoying mystery satellite transmitting AFSK, frequency modulated Morse on 144.100 MHz for several days has been identified. It turned out to be a signal from the MAROC-TUBSAT satellite. This is an Earth-sensing spacecraft owned by a Moroccan government agency called he Royal Center for Remote Sensing. It was placed into a polar orbit by a Russian launcher on December 10, 2001.

As soon as he learned of the interference to amateur operations, Professor Udo Renner of the Center had the 144.100 MHz transmitter turned off. He then notified AMSAT Germany that TUBSAT was no longer on two meters.

But TUBSAT also has a downlink at 436.075 MHz. This system is only busy over North Africa and Europe and only when the control stations in Rabat and Berlin are activated. It has not been heard elsewhere in the world. (AMSAT-NA)

**

Break 1

From the United States of America, we are the Amateur Radio Newsline, heard on bulletin stations around the world including the Pentucket Radio Club repeater serving Groveland Massachusetts

(5 sec pause here)

**

SPECTRUM PRESERVATION: ARRL SAYS IT WILL FIGHT TO KEEP RFID OFF 70 CM

The ARRL says that it will go all the way to protect the 70 centimeter ham band from a threat brought by commercial interests. At issue is a plan from SAVI Technology and already tentatively agreed to by the FCC to deploy unlicensed transient R-F identification tag transmitters operating between 425 and 435 MHz. These tags run at much higher field strengths and duty cycles than Part 15 rules now permit.

According to a League bulletin issued on January 29th, ARRL officials have already met with members of the FCC staff as part of the League's effort to stave off a band threat. The bulletin says that General Counsel Chris Imlay, W3KD, and ARRL Technical Relations Manager Paul Rinaldo, W4RI, delivered an ex parte presentation to FCC Office of Engineering and Technology staffers January

14th outlining the opposition of the ham radio community. (ARRL)

**

FCC: CHAIRMAN POWELL HOME AFTER HOSPITAL TESTS

Federal Communications Commission Chairman Michael Powell was discharged from the hospital on Friday January 25th. This, after a two-night stay in the to undergo tests because of a lingering stomach bug.

Stomach discomfort caused him to cancel appearances at the Consumer Electronics Show in Las Vegas on January 8th and again at the annual conference of the National Association of Television Program Executives on Wednesday January 23rd. Doctors advised precautionary tests that required overnight stays at Walter Reed Army Medical Center in suburban Washington. (Published news reports)

**

ENFORCEMENT: THAT SONG WAS NOT AS BAD AS WE THOUGHT

The Federal Communications Commission has dropped an indecency fine against a Colorado radio station. KKMG FM of Colorado Springs had been fined seven-thousand dollars for airing the edited version of Eminem's "The Real Slim Shady." This, after a listener wrote the regulatory agency to complain.

At the time the fine was issued federal regulators said the edited version still included some expletives and references to violence and graphic sex. But the FCC now says it has reconsidered. It now says that the lyrics in the edited version didn't violate its rules by being "patently offensive." (FCC)

**

RESCUE RADIO: BRAZIL RADIO OPERATORS HELP IN POWER OUTAGE CRISIS

A major electricity blackout hit at least five Brazilian states on January 21st, and it was hobby radio enthusiasts that let people know about it.

The blackout, which began at 1:30 p.m., hit hardest in the industrial southeast and the major cities of Sao Paulo, Belo Horizonte, Rio De Janeiro, Goiania, Vitoria and the capital, Brasilia.

According to news reports, Brazil’s National Energy Agency blamed the outage on transmission line failures. The same news report credited Brazilian hobby radio operators as informing authorities that subways in Rio De Janero and Sao Paulo were halted and that traffic lights were out snarling commuters in several areas.

The outage was caused by a failure at the Itaipu hydroelectric station in southwestern Brazil. A power-line failure caused thirteen of the dam's eighteen turbines to stop, cutting off nearly 20 percent of the country's energy. Power was restored about three hours later. The news story did not identify the radio operators as being hams. (Various shortwave news reports)

**

RESCUE RADIO: NEW INTER-JURISDICTION RADIO SYSTEMS BEING INTRODUCED

Santa Clara County California, police, fire and emergency medical personnel have never been able to communicate with one another at the scene of a major disaster. This is because each agency uses a separate radio system. That is expected to change this year.

Santa Clara County will be leading the nation in using new digital radio technology to solve the inter-agency communications problem. The new system will allow up to eighteen participating jurisdictions in any county to talk to one another instantly.

By way of example, once the system is up and running, officers involved in one of California's famed high-speed car chase will be able to talk directly to police in the neighboring jurisdiction as the suspect approaches that town. They won't have to switch channels or go through dispatch centers. This means less time wasted and the probability that lives will be saved.

While Santa Clara county is at the head of the pack in adopting this new digital communications technology, the same news reports say that and Washington, D-C is not far behind. (Cal-State Info.)

**

PUBLIC RELATIONS: A CHEAP SATELLITE

A Cheap Satellite is the name of an Associated Press item that highlighted the work of the faculty and students at the United States Naval Academy in the development and launch of the P C Sat ham radio satellite. The story tells how the twenty-five pound bird was built using off the shelf products including a tape measure for its antenna and rechargeable double A cell batteries for power.

The story was written by Tom Stuckey and moved on the wire on Wednesday January 23rd. It noted that PCSat, was the 44th amateur satellite put in orbit. It is one of more than a dozen built by university students around the world. (VHF Reflector)

**

CONVENTIONS & HAMFESTS: ORLANDO HAMCATION WEAK SIGNAL FORUM

The Orlando HamCation will host its first ever Weak Signal VHF and UHF forum. Beginning at 2 p.m. on Saturday Ferbruary 9th, the one hour session will be moderated by N2CEI, of Down East Microwave. Also, Tom Haddon, K5VH, will be on hand to motivate more Florida hams to become active on the Microwave bands.

If you are in the Orlando Florida area on February 8th to the 10th drop in on the Orlando Hamcation. For more details and or advance reservations, go to oarc.org/hamcat.html on the World Wide Web (W2BZY)

**

CONVENTIONS & HAMFESTS: DATE CHANGE FOR RADIOFEST 2002

Brian Broggie, W6FVI, asks that we pass along a date change for RadioFest 2002 sponsored by the Naval Post Graduate School Amateur Radio Club in Monterey California. The new date is February 23rd. More information is in cyberspace at k6ly.org/radiofest. (W6FVI)

**

BREAK 2

Here when you need us 52 weeks a year. We are the Amateur Radio Newsline, with links to the world from our only official website at www .arnewsline.org.

(5 sec pause here)

**

HAM RADIO SCHOLARSHIPS: THE DARA SCHOLARSHIPS

The Dayton Amateur Radio Association is one of three ham radio organizations seeking nominations for its scholarship program for the 2002-2003 academic year. According to DARA, applicants must be graduating high school seniors in 2002 and hold any class of an FCC issued mateur Radio license. The scholarship awards run up to $2000, as determined by the scholarship committee. Money must be used toward tuition at an institution of higher education.

To obtain an application, send a self-addressed, stamped envelope to the Dayton Amateur Radio Association Scholarship Program, 9873 Lower Valley Pike, Medway, Ohio 45341. You can also obtain an application by e-mail to n8emo1@msn.com. Completed applications must be postmarked no latter than June 1st to be eligible for this years scholarship program. (DARA)

**

HAM RADIO SCHOLARSHIPS: THE FOUNDATION FOR AMATEUR RADIO

Another organization offering scholarships to hams id the Foundation For Amateur Radio. The Washington, D.C. area group will administer sixty-two scholarships for the academic year running from 2002 through 2003. Licensed Radio Amateurs may compete for these awards if they plan to pursue a full-time course of studies beyond high school and are enrolled in or have been accepted for enrollment at an accredited university, college or technical school. The awards range from $500 to $2500 with preference given in some cases to residents of specified geographical areas or the pursuit of certain study programs. Additional information and an application form may be requested by letter or QSL card to the FAR Scholarships, Post Office Box 831, Riverdale, Maryland, 20738. (Foundation For Amateur Radio)

**

INTERNATIONAL - SOUTH AFRICA: SA RADIO AMATEURS OF THE YEAR NAMED

Turning to international news, South Africa is honoring two of its own as that nations Radio Amateurs of the Year. Q-News Graham Kemp, VK4BB, brings us the details:

--
The South African Amateur Radio Development Trust have announced the winners of the 2001 Siemens Radio Amateur of the Year Award. This award is made annually to a Radio Amateur who has made a major contribution to the Amateur Service either on a technical or development basis in ZS land.

The award has been bestowed jointly on Bradley Phillips, ZS5BP, and Garth Wilson, ZR6CY. ZS5BP for his work on the introduction of Iphone and the development of the Internet Radio Linked project. ZR6CY for his continuous efforts to develop communication skills amongst the youth. He has to date presented no less than 80 camps for Voortrekkers to learn the Morse code and basic communication skills.

For Q-News Australia, I'm Graham Kemp, VK4BB, reporting for the Amateur Radio Newsline.

--

This award is considered as South Africa's equivalent to the Dayton awards presented here in the United States. (SARL News, Q-News)

**
INTERNATIONAL - UK: KENWOOD TROPHY AWARDED TO G3XWH

Meantime, over in the U-K, Richard Horton, G3XWH, who chaired the RSGB's Future Licensing and Examination Forum has been awarded the Kenwood Trophy. This, for his significant contribution to training and development in amateur radio.

Horton recently retired from the Radio Society of Great Britain's Board where he was responsible for amateur radio development. His committee was responsible for much of the work that went into the creation of the new U-K Foundation Class license. (GB2RS)

**
DX

In DX, DJ4KW and DK9GG are currently active from Belize as V31YN and V31GW, respectively, through early February. Activity is on CW, RTTY and PSK 31. (RSGB)

And IN3QBR will be active from Vientiane as XW3QBR until the 31st of July. He will be joined, from the 20th of April until the 10th of May by IN3ZNR operating as XW3ZNR. (OPDX)

And R1ANF began operations as CE9 slash R1ANF on the 29th of December from a Chilean base in the South Shetland Islands. He is active on 10 to 28MHz with 100 watts to an R6000 vertical. For all three QSL as directed on the air. (RSGB)

**
THAT FINAL ITEM: CELEBRATING THE LIFE OF ED CLEGG W2LOY

And finally this week, if you were on the VHF bands in the 50's, 60's and 70's then the name Clegg Labs touched your ham radio operations. And as we hear in

this report, the family of the man behind the gear is inviting you to help celebrate his life.

--

Even if you did not own any Clegg gear, the chances are that you talked to someone on the air who did. Whether it was the top of the line Interceptor receiver and Zeus transmitter or the entry level 99'er transceiver, it was easy to spot a Clegg signal by its almost overpowering modulation that seemed just right for the R-F carrier it was on.

Almost every product that carried the Clegg label was designed by the company's founder Edward T. Clegg, W2LOY. When he moved the company to Pennsylvania in the 1970's, Ed took the call W3LOY. Likewise, after retiring to Ohio he traded the 3 for an 8, but kept the famed L-O-Y suffix.

And regardless of the call area, Ed Clegg was first and foremost a communications designer well ahead of his time. Even more important, he was a positive influence on just about everyone with whom he came in contact.

Ed Clegg left us last September at age 80. Now, his wife Martie will be hosting a gathering in March near the Clegg home in Lancaster Ohio. The purpose is to celebrate the life of Edward T. Clegg. And they are asking you to help.

Martie, her daughter Linda and Linda's husband Rob MacGuffie, K2HZN, are asking anyone who knew Ed to share in the celebration. They know that most of you won't be able to be in Lancaster Ohio on March 30th. But some of you do have memories, stories, photos and other Ed Clegg memorabilia that would help to make this day even more unforgettable.

If you have something to share, please contact Linda and Rob before the end of February. Their address is 70 Province Road, Gilmanton New Hampshire with a zipcode of 03237. Rob's cyperspace address is K2HZN@yahooo.com.

For the Amateur Radio Newsline, I’m Cathy Anno, KB0FDU.

--

By the way, a number of us here at the Amateur Radio Newsline began our ham radio careers using gear designed by Ed Clegg. In fact, our producer Bill Pasternak, WA6ITF, got to know Ed while Bill was still a teenager operating A-M on the 6 meter band. (Clegg family)

**

NEWSCAST CLOSE

With thanks to Alan Labs, Amateur News Weekly, AMSAT, the ARRL, the CGC Communicator, CQ Magazine, the FCC, the Ohio Penn DX Bulletin, Radio Netherlands, Rain, the RSGB and Australia's Q-News, that's all from the Amateur Radio Newsline(tm). Our e-mail address is newsline @arnewsline.org. More information is available at Amateur Radio Newsline's(tm) only official website located at www.arnewsline.org. You can also write to us or support us at

Amateur Radio Newsline(tm), P.O. Box 660937, Arcadia, California 91066.

For now, with Bill Pasternak, WA6ITF, at the editors desk, I'm _____
saying welcome to the year 2002, 73, and we thank you for listening." Amateur
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984. Re: Dummy needs help w/grid dip meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-02 18:33:24 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c5c2e21.618088@news.freeserve.net>
Source record: 46736

Rick, it was wrongly attributed but your advise is valid
see www.corn2.freeserve.co.uk/gdo/gdo.htm

On Sat, 2 Feb 2002 22:26:27 +0800, "Richard Hosking"
<zaprichardh@iinet.net.au(remove the zap)> wrote:

>A couple of turns may be effectively shorting the antenna feedline at 7 MHz.
>This would give a very flat dip which may be difficult to pick up. You could
>try transforming the impedance via a toroid with quite a few turns on the
>secondary (to antenna) and only a few turns on the primary feeding a link
>also with with a few turns which is coupled to the GDO. They generally dont
>have a flat reading across the band because they may tune an octave or more
>for each band. However a resonance is generally quite sharp.
>
>Richard
>
>"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
>news:3c4f3f70.11880145@news.freeserve.net...
>> On Sun, 20 Jan 2002 16:17:08 -0500, WebRat@wehackz.org wrote:
>>
>> >Hi all,
>> >
>> >I am in possession of a grid dip meter that I have no idea how to
>> >operate! I would RTM, but, there's no M to R ;) The only other ham I
>> >know is a off-the-shelf 2-meter only kinda fella. He tried, but
>> >doesn't know much more than I do about the thing.
>> >
>> >If I understand what I've found about it, here's what I do.
>> >
>> >1. install a coil to oscillate in the desired range e.g., 3.7 MHz -
>> >8.0 MHz for 40Meters
>> >2. after warm-up, adjust the output so that the meter reads at a
>> >setpoint on the scale.
>> >3. place the coil near the circuit under test (2 turns of #22 solid
>> >wire across the feedline of my cut-freq 7.150MHz dipole in this case)
>> >4. vary the freq control until there is a large change in the meter
>> >reading.
>> >
>> >Here's the problem; the thing has several large fluctuations across
>> >the range of the selected coil, none of which seem to be harmonics of
>> >7.15 MHz.
>> >
>> >The VSWR meter shows me 1.2:1 at 7.15MHz, so the antenna is properly
>> >tuned, or the swr meter is lying.
>> >Anyone got some help for a digital dummy attempting to climb into a

>> >vaccuum tube world?
>> >
>> I found this article on GDO's, perhaps it will help ...
>> http://www.qsl.net/iz7ath/web/02_brew/15_lab/02_dipper/pag01_eng.htm
>> and I thought of you ;-)
>> hth Mike W, G8NXD M3MSM qthr
>
>

985. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-02 19:23:52 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0202021123.1fcfd5ff@posting.google.com>
Source record: 46726
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Win Hill <whill@mediaone.net> wrote in message news:<3C5BF5C3.4D8B2288@mediaone.net>...
> John Miles wrote:
> >
> > Clifton T. Sharp Jr. wrote:
> >>
> >> I steadfastly refused to go past 3.11 myself; I refused Win9x entirely.
> >> Eventually my nephew shamed me into converting to linux, where I've been
> >> happy ever since.
> >>
> >> Epilogue: then the wife comes home needing Win98 for her real-estate
> >> applications. *sigh*
> >
> > The ironic thing is that even the beta releases of Win95 were so much
> > better than Win 3.1x it's not even funny. Most professional DOS/Windows
> > developers (like myself) installed the spring '95 beta release of
> > Chicago and never looked back. You and Mike, on the other hand, appear
> > to have barricaded yourself in a roomful of snakes just to avoid dealing
> > with the roomful of worms next door. :)

> > It's perfectly reasonable to go with Linux over Win9x if that's your
> > thing, but using Windows 3.1 in 2002 just to be contrary is, to say
> > the least, self-defeating.
>
> Mike, you could at least graduate to Windows-for-Workgroups,
> that was the final improved Windows 3 version! Actually, my
> suggestion is to get serious and jump straight to Windows 2000
> with a set of new computer hardware. $650 will get you a new
> box with an everything-on-the-board mobo with a say 1.5GHz AMD
> Athlon and 512M of DDR memory: one screaming Spice machine.
> Add $150 for a hard drive plus $150 more in tax to Microsoft...
>
> OK, maybe Linux doesn't sound so bad, keep that last $150 and
> save some more money by just getting 256M of DDR ram.
>
> - Win

Thanks, Win.

Actually, the main reason for staying with Win 3.x is I have my own
file management system that runs in DOS. It keeps a list of the files
in each directory along with a comment that I can edit to include key
words that describe the contents. The comment is attached to the file
and stays with it when I copy or move the file to different
directories.

Another program collects all the directory lists and makes a single index. Unlike most indexing programs that run overnight, this takes a little over one minute.

Using the index, I can search the entire contents of my 8 gig hard disk in less than two seconds, and find all the files that meet the search criteria.

With a single keypress, I can go to the directory that contains the file, and the cursor is automatically placed on the target file.

Then comes the magic. I have five or six keys assigned to do different things depending on the file extension. I can edit the file, view it in various DOS graphics viewers, edit images using Windows programs, view PDF files using Acrobat that runs under Windows, view HTML files using Opera, Netscape, or MSIE under Windows, etc.

This technique reverses the normal opertation of GUI programs where you first pick the program you wish to use, then try to find the file. It may be in any of thousands of directories on the disk, and may be among tens of thousands of files. I cringe when I watch someone try to find a file in Windows or Linux. The waste of time is horrible.

The key is to be able to load Windows or DOS programs as needed. A DOS program can call W95/98 programs, but it is painful. It is very easy with Win 3.x

I actually have three Windows installations. I use WFWG on drive C, and two separate Windows 3.11 installations on drives F and G.

The one on drive F is strictly for internet use, since Opera, Netscape, and MSIE regularly crash, and sometimes crosslink all the files on drive F. I have a backup computer that duplicates all the files so restoring is easy (but slow).

WFWG on drive C is for fast loading of a few Windows programs like Opera and Acrobat from my DOS file manager. The one on drive G is the largest and slowest installation, and is used for general Windows programs such as Paint Shop Pro, Microcap V, PSPICE, etc.

I believe the approach of finding the file first, then loading the desired program is from 10 to 100 times faster than GUI programs.

I would be happy to share the code if anyone is interested. It runs in Borland Pascal and compiles in TP6, TP7, or BP7. Some of the directories are hard-coded in various places, but I could put them all in an INI file. It would take a while, but if anyone is serious about trying it, I would be happy to do it.

You have to be currently running Win 3.x, and be able to program in Pascal. I could not possibly satisfy all the requests for program changes for those who could not do it themself.

My next problem is to figure out how to do the same thing in Linux:)

Regards,

Mike Monett
mrmonett@yahoo.com

986. Re: Ä¾ÂÝ¶¤.ÂÝË¨.ÂÝÄ¸.ÂÝ¶¤.Ã¶¤.Í, 0577-86525020

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-02 23:43:08 UTC
From: " .Your Friend Bill" <none@coqui.net>
Message-ID: <3C5C798C.8190B102@coqui.net>
Source record: 46727

FUCKOFF SPAMMER!

"ï¿½ï¿½ï¿½ï¿½Æ½" wrote:
>
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ï¿½ï¿½Ë¿,ï¿½ï¿½Ä¸,ï¿½ï¿½È¦,Ãï¿½ï¿½,ï¿½ï¿½,ï¿½ï¿½
>
> ï¿½ç»°:0577-86525020--86523297--86523275ï¿½ï¿½ï¿½ï¿½:88525430
>
> ï¿½ï¿½ï¿½ï¿½ï¿½ï¿½Ê¼ï¿½: acbac@mail.wzptt.zj.cn
>
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> | ï¿½Û¸ï¿½ï¿½ | ï¿½ï¿½ï¿½ï¿½ï¿½ï¿½ï¿½Ïµ|
>
> ï¿½ï¿½ï¿½-> 01--14 01-15 01-05
> 01--08 01--15
>
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> ï¿½Ê¾Ö£ï¿½www.163.net

987. Re: Where ? ARRL Radio Designer software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-02 23:46:31 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C5C7A57.77817E9C@ieee.org>
Source record: 46728

This utility was talked about in the latest PC Magazine...

Ad-aware

That apparently tells you about spyware on your system. I have downloaded
it, am using it, but cannot vouch for its usefulness yet.

http://www.lavasoft.de/downloads.html

Clyde

"Russell C. Nixon" wrote:

> Henry Gernhardt/Andrea Winship <hcg_NOSPAM_alw@earthlink.net> wrote:
>
> >Mike, Rex:
> >
> >> >Mike , If you download a prog. called 'Go!Zilla' you will be able to
> >> >continue downloading any prog. or file at a future log-on session.
> >
> >> Last I checked, The Go!Zilla package contained spyware which it
> >> installed on your system.
> >
> >Spyware? What exactly is that?
> >
> >In any case, I had no problems resuming a broken download using Netscape
> >Navigator 4.75.
> >
> >Good luck,
> >
> > Henry C. Gernhardt, III
> >
> >Remove _NOSPAM to reply direct
> Spyware is the generic term for software that is often installed on
> your computer via Java scripts. It reports back to the sponsors
> information about your browsing and buying habits. It can also have
> more nefarious uses, such as recording keystrokes and reporting them
> back to whomever launched the program. This is useful for stealing
> passwords and etc. It is the ultimate "black-bag" job because it
> doesn't even require physical penetration. Use a firewall, get a good
> anti-virus package and use ad-aware to detect and delete spyware.
>
> Russ

988. Re: Dummy needs help w/grid dip meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 00:29:45 UTC
From: spagnet@austin.rr.com
Message-ID: <Zv%68.61584$Ar5.2620705@typhoon.austin.rr.com>
Source record: 46729

I've used a grid-dip meter a few times, but I'm no expert. I can say that you want to couple to the circuit under test as loosely as possible. In other words I wouldn't put the dip meter coil any closer to the coupling coil on your antenna than is necessary.

The reason is that you'll get a capacitance coupling between your dip meter and coupling coil that will cause other resonances to show up.

KI5XW

"Richard Hosking" <zaprichardh@iinet.net.au(remove the zap)> wrote in message news:3c5bf637$0$17654@echo-01.iinet.net.au...
> A couple of turns may be effectively shorting the antenna feedline at 7 MHz.
> This would give a very flat dip which may be difficult to pick up. You could
> try transforming the impedance via a toroid with quite a few turns on the
> secondary (to antenna) and only a few turns on the primary feeding a link
> also with with a few turns which is coupled to the GDO. They generally dont
> have a flat reading across the band because they may tune an octave or more
> for each band. However a resonance is generally quite sharp.
>
> Richard
>
> "Mike W" <mike@corn2.freeserve.co.uk> wrote in message
> news:3c4f3f70.11880145@news.freeserve.net...
> > On Sun, 20 Jan 2002 16:17:08 -0500, WebRat@wehackz.org wrote:
> >
> > >Hi all,
> > >
> > >I am in possession of a grid dip meter that I have no idea how to
> > >operate! I would RTM, but, there's no M to R ;) The only other ham I
> > >know is a off-the-shelf 2-meter only kinda fella. He tried, but
> > >doesn't know much more than I do about the thing.
> > >
> > >If I understand what I've found about it, here's what I do.
> > >
> > >1. install a coil to oscillate in the desired range e.g., 3.7 MHz -
> > >8.0 MHz for 40Meters
> > >2. after warm-up, adjust the output so that the meter reads at a
> > >setpoint on the scale.
> > >3. place the coil near the circuit under test (2 turns of #22 solid
> > >wire across the feedline of my cut-freq 7.150MHz dipole in this case)

> > >4. vary the freq control until there is a large change in the meter
> > >reading.
> > >
> > >Here's the problem; the thing has several large fluctuations across
> > >the range of the selected coil, none of which seem to be harmonics of
> > >7.15 MHz.
> > >
> > >The VSWR meter shows me 1.2:1 at 7.15MHz, so the antenna is properly
> > >tuned, or the swr meter is lying.
> > >Anyone got some help for a digital dummy attempting to climb into a
> > >vaccuum tube world?
> > >
> > I found this article on GDO's, perhaps it will help ...
> > http://www.qsl.net/iz7ath/web/02_brew/15_lab/02_dipper/pag01_eng.htm
> > and I thought of you ;-)
> > hth Mike W, G8NXD M3MSM qthr
>
>

989. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 02:16:21 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c5c9c97$0$20295@echo-01.iinet.net.au>
Source record: 46730
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John

This thread seems to have generated a bit of interest since I have been at
the beach
There is no reason why the 9852 could not be used as we are only using one
output
I have done some schematics which I have sent
I can post these as GIF (5 files) if people want
Some comments from the group
Why not use the 9854/2 comparator instead of another chip?
Could the Minicircuits LPF could be replaced with discrete components? This
would be somewhat cheaper and about as simple board wise
I note the comments on the ERA-5 and current sinks to cancel regulator
noise. This citcuit should be used on the supply to the loop integrator

Richard

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message
news:3C5466D3.52EA@pop.removethistomailme.net...
> Kijoma wrote:
> >
> > Why use the ad9854 agn?, would the 9852 do the job?
> ----------

990. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 02:25:22 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C5CA073.40C1@pop.removethistomailme.net>
Source record: 46731
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Bill Kirkland wrote:
>
> Regarding Q, from the same paper.
>
> When we extend our design to become a VCO, by adding a tuning diode, we must also
> consider the phase noise introduced by that diode. Contrary to what you may have
> read elsewhere, this noise is not due solely to Q reduciton from the added diode.
> The diode itself introduces noise that modulates the VCO frequency.
> The easiest way to analyze this noise is to treat the diode's noise contributions
> as that of an equivalent resistance R. This resistor can then be considered to be
> generating the thermal noise voltage that any resistance exhibits:
> Vn = sqrt (4 KToR deltaf)
>
> Rhode not me.

Cool, I stand corrected! I would have thought it was just a matter of
improving the Q (which definitely is another benefit of the
multiple-diode-set approach).

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

991. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 02:28:02 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C5CA113.9B3@pop.removethistomailme.net>
Source record: 46732
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Bill Kirkland wrote:
>
> From a later paper
> A High-Performance Hybrid Frequency Synthesizer, QST March 1995
>
> A key factor in the synthesizer's relative simplicity is that it uses a single,
> wide range LO VCO rather than several switched VCOs. Achieving low phase noise
> with this arrangement requires taht the loop's tuning diodes, and therefore the
> associated loop-filter op amp, operate at a considerably higher voltage than
> the system's 5 and 10-V buses.

That's interesting. I've noticed on my own prototype that the
out-of-band noise performance at 2 GHz is almost as good as it is at 1
GHz, and was wondering why.

I've got the QEX CDs but not the QST ones (yet)... if the .PDF file for
that March 1995 hybrid-synth article were to magically appear in my
inbox, it would be most appreciated. (Or on the fax machine at
425-893-9111). :) I'd like to see what his approach was, having just
'discovered' the Digi-Key crystal filters myself.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

992. Re: Smallest QRP Rig?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 03:53:05 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C5CB421.87B08C94@eznec.com>
Source record: 46733

Michael makes an important point -- people often sacrifice a lot of quality for small size. The "Optimized" QRP transceiver I described in August 1980 QST catches attention because of its size, but no compromise of any kind was made in its performance for the sake of size. It's a very usable rig, which I still have, and it's worked all states (all confirmed) and 33 countries -- in addition to providing countless hours of ragchewing. (It didn't take 20 years to work the states and countries -- that was done many years ago now.) But small is cute. One of the cutest I've seen was a rig built into a 9 volt rectangular battery shell. I have no idea how it might have performed.

Roy Lewallen, W7EL

Michael Black wrote:
>
> I think the biggest consideration is how small components you
> can get, and your own skill at shoehorning it into a small space.
>
> Roy Lewellan has described some very small rigs in QST, and no,
> they weren't just the very simplest. From the photos, he's
> put some effort into getting it all very small.
>
> You could throw together something extremely simple, but other
> than the novelty of "the smallest rig", and people have been
> doing this over the years, would you really be happy with the
> performance? Unless you just want novelty, you probably
> want a little more circuitry, and then the question is
> getting it into a small space, rather than starting with
> a simple rig.
>
> One thing people wrote about thirty years ago was that
> useability goes down as size decreases. So you can squeeze
> the circuitry into a small space, but you may have problems
> manipulating the knobs, or finding panel space for the
> knobs and controls you need.
>
> I think some of the most practical tiny equipment that I've
> seen has been focused on rigs people have built to
> take into the wilderness. Wes Hayward described the Micromountaneer
> in QST years ago, and he intended it for this purpose. It
> was small enough for his backpacking needs, but it was also
> a useable piece of equipment. It was a direct conversion receiver,
> and VXO controlled transmitter.
>
> Michael VE2BVW

993. Re: Where ? ARRL Radio Designer software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 04:34:14 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a3ietf$18qfvc$1@ID-124126.news.dfncis.de>
Source record: 46734

In the non-too-distant future all services provided by radio broadcasting, entertainment, education, news, will be available only over the Internet.

All computers capable of being connected to the internet will, by law, have built-in spy-ware. What you do with your computer, what programs you listen to, what TV programs you watch, what messages you send and receive, who or what you vote for will be permanently tapped.

Amongst the other present means of communication between individuals, amateur radio will be prohibited on pain of imprisonment or death, or just withdrawal of Viagra and other contentment medications.

Indeed, everything you do, wherever you are on this Earth, will be immediately and continuously monitored by Big Brother's = CIA's super-computers.

They who own and control the World's communications systems, terrestrial and via satellite, will rule the Earth.

And there's nothing you or I can do about it. Or will even want to do about it. So much for the continuing evolution of the human race.

994. Re: Smallest QRP Rig?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 05:49:16 UTC
From: " .Your Friend Bill" <none@coqui.net>
Message-ID: <3C5CCF5C.AC3B75D6@coqui.net>
Source record: 46735

Roy Lewallen wrote:
>
> Michael makes an important point -- people often sacrifice a lot of
> quality for small size. The "Optimized" QRP transceiver I described in
> August 1980 QST catches attention because of its size, but no compromise
> of any kind was made in its performance for the sake of size. It's a
> very usable rig, which I still have, and it's worked all states (all
> confirmed) and 33 countries -- in addition to providing countless hours
> of ragchewing. (It didn't take 20 years to work the states and countries
> -- that was done many years ago now.) But small is cute. One of the
> cutest I've seen was a rig built into a 9 volt rectangular battery
> shell. I have no idea how it might have performed.
>
> Roy Lewallen, W7EL
>
> Michael Black wrote:
> >
> > I think the biggest consideration is how small components you
> > can get, and your own skill at shoehorning it into a small space.
> >
> > Roy Lewellan has described some very small rigs in QST, and no,
> > they weren't just the very simplest. From the photos, he's
> > put some effort into getting it all very small.

Is further information on this project online anywhere?
-Bill WX4A

995. Re: How to connect lights etc. to clockwork Freeplay generator?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 06:35:24 UTC
From: "Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net>
Message-ID: <74B00542DD2EA01A.8AABDC43ABFC332A.E82129D059EFCE3B@lp.airnews.net>
Source record: 46737

On 31 Jan 2002 19:52:20 -0800, blackm00@cam.org (Michael Black) wrote:

>It says it's a 3volt generator. Apparently, the clockwork mechanism
>is the important part, and it drives a "tiny 3vdc generator". I
>wonder if that's actually a motor used in reverse, or they use something
>special.

Not sure where my radio is, but I have one of the flashlights here
too, and it appears to use a normal motor.

I know the radio (at least my small one, not sure about the larger
model that's available) doesn't have this feature, but the flashlight
has a 3VDC output jack on it.

Joe Bramblett, KD5NRH
kd5nrh@kd5nrh.net

996. Re: Dentron GL-1000 need help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 06:54:36 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <M8578.19$mR.2233@newshog.newsread.com>
Source record: 46738

"ni4l" <ni4l@charter.net> wrote in message
news:3C5B819D.B3D82D6E@charter.net...
> i took the relay out and cleaned it really good also checked to make
> sure that no shorts giong to pl259s.

Did you check the coax from the tank coil to the relay?

--
Roger (K8RI EN73)
WWW.RogerHalstead.com
N833R, World's Oldest Debonair? S#CD-2

i checked for any loose connections
> found none. Its like when you key it up and apply power you can just
> barley see the output meter after the amp barely move. with the amp off
> talking thru it have no problem getting out. Can press relay when i am
> receiving and receive goes away. Its not letting the power come out of
> the amp.Is there any thing else i could check?
> thanks for your time
>
> ni4l wrote:
> >
> > Hi
> > I have picked up a orginial no mods Gl-1000 it has a plate voltage of
> > 1100
> > volts on the plate. the swr between the rig and amp was checked 1:5:1
> > have a mn2000 between icom 751 and amp but since swr was ok just left in
> > thru mode.
> > when i flip swith to current it does not move.
> > when i flip to rel output and tune on it plus the adj in back for rel
> > output it shows around 4-500 on top scale but amp is producing no output
> > have drake w4 in line after amp shows 0 output. was checking on 3.919
> > since it is the only resonate wire antenna i have up.
> > any help on this would be greatly appreciated.
> > chris NI4L

997. Re: Where ? ARRL Radio Designer software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 07:35:14 UTC
From: rex*non*spam*a@dnai.com
Message-ID: <oapp5ucn50bb0mq96v4qo1srjamc2tprv0@4ax.com>
Source record: 46739

On Sun, 3 Feb 2002 04:34:14 -0000, "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>In the non-too-distant future all services provided by radio broadcasting,
>entertainment, education, news, will be available only over the Internet.
>
>[snips]
>
>Indeed, everything you do, wherever you are on this Earth, will be
>immediately and continuously monitored by Big Brother's = CIA's
>super-computers.
>
>And there's nothing you or I can do about it. Or will even want to do about
>it. So much for the continuing evolution of the human race.
>

There is some possibility we are heading in this direction. I think
knee jerk reactions to the recent terrorist actions and threats do
make this sort of big brotherism more likely to evolve.

So far, there are some good signs that we are stopping the worst of
it, at least in the US. NSA tried to leverage some of their own
hardware into PC's and other communication devices a few years ago,
but didn't pull it off. Hopefully freedom of speech and other US
rights won't be thrown out in the next few years.

One thing we have going in our favor, is that even if it all is
tapped, the volume of information is a little daunting. Of course,
that doesn't mean some organisations won't want to try.

-Rex

998. Re: Smallest QRP Rig?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 08:20:49 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C5CF2E1.D5092BF@eznec.com>
Source record: 46740

```
" .Your Friend Bill" wrote:
>
> Roy Lewallen wrote:
> >
> > Michael makes an important point -- people often sacrifice a lot of
> > quality for small size. The "Optimized" QRP transceiver I described in
> > August 1980 QST catches attention because of its size, but no compromise
> > of any kind was made in its performance for the sake of size. It's a
> > very usable rig, which I still have, and it's worked all states (all
> > confirmed) and 33 countries -- in addition to providing countless hours
> > of ragchewing. (It didn't take 20 years to work the states and countries
> > -- that was done many years ago now.) But small is cute. One of the
> > cutest I've seen was a rig built into a 9 volt rectangular battery
> > shell. I have no idea how it might have performed.
> >
> > Roy Lewallen, W7EL
> >
> > Michael Black wrote:
> > >
> > > I think the biggest consideration is how small components you
> > > can get, and your own skill at shoehorning it into a small space.
> > >
> > > Roy Lewellan has described some very small rigs in QST, and no,
> > > they weren't just the very simplest. From the photos, he's
> > > put some effort into getting it all very small.
>
> Is further information on this project online anywhere?
> -Bill WX4A

No.

Roy Lewallen, W7EL
```

999. Re: Smallest QRP Rig?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 08:31:43 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C5CF56F.8E8C156F@eznec.com>
Source record: 46741

Roy Lewallen wrote:
>
> No.
>
> Roy Lewallen, W7EL

Sorry, I spoke too soon. I meant that I haven't put anything about it on the web. A search for "Optimized QRP Transceiver" brought a handful of hits, including some modified versions, and a reprint of the ARRL Handbook version of the article. You can get the latter from http://www.arrl.org/tis/info/pdf/93hb3037.pdf. Do a search to get the others. You might get some additional ones by changing the spelling of "optimized" to the Queen's English equivalent "optimised".

Roy Lewallen, W7EL

1000. Re: Smallest QRP Rig?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 09:40:29 UTC
From: Mark Hall <vze2mhvc@bellatlantic.net>
Message-ID: <3C5D046F.CFCB69B9@bellatlantic.net>
Source record: 46742

How about somebody designing a QRP Transmitter add on module for the PCR-1000? Use the PCR synthesizer, filters etc., to generate SSB and CW QRP signals. Now that would be quite a QRP rig, with a killer receiver for a change. Probably not that hard to do. Laptops these days are cheap.

'73 KI4Z

JLB wrote:

> Just curious...
>
> How small can a QRP homebrew transceiver be built? (and I do not mean
> fabricating a custom IC. I mean with typical homebrew methods.)
> Perhaps something for 80, 40, or 30 meters.
>
> Are there any designs on the web?
>
> I was wondering if a single NE602 could somehow be used as a
> transceiver, or would it be better to use single transistors?
>
> Jim
> N8EE

1001. Need wiring code!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 13:01:52 UTC
From: humanmachine@att.net
Message-ID: <d460990a.0202030501.38ba09b9@posting.google.com>
Source record: 46743

I just purchased a yaesu ft-101ex and cannot get my silver eagle wired right for the thing. Help me please.

1002. Re: Smallest QRP Rig?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 13:37:58 UTC
From: " .Your Friend Bill" <none@coqui.net>
Message-ID: <3C5D3D36.1EA230CD@coqui.net>
Source record: 46744

```
Roy Lewallen wrote:
>
> Roy Lewallen wrote:
> >
> > No.
> >
> > Roy Lewallen, W7EL
>
> Sorry, I spoke too soon. I meant that I haven't put anything about it on
> the web. A search for "Optimized QRP Transceiver" brought a handful of
> hits, including some modified versions, and a reprint of the ARRL
> Handbook version of the article. You can get the latter from
> http://www.arrl.org/tis/info/pdf/93hb3037.pdf. Do a search to get the
> others. You might get some additional ones by changing the spelling of
> "optimized" to the Queen's English equivalent "optimised".
>
> Roy Lewallen, W7EL

Thanks for the info.
-Bill
```

1003. Re: Supply dry capsicum and do to sample in a large amount

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 15:37:46 UTC
From: Mark Hall <vze2mhvc@bellatlantic.net>
Message-ID: <3C5D582E.7A311748@bellatlantic.net>
Source record: 46745

Good Grief.. Won't you Chinese Guys quit posting this CRAP on this news Group?? I'm not sure of Chinese customs.. but over here, it's RUDE as Hell to post unwanted msgs in a topic specific News Group. We call it SPAM!

LIU wrote:

> Hello! We are a trading companies of China , engaged in
> agricultural product trade mainly.
> Now, there are a large amount of DRY Chilli in our
> company, quality is very good , the length is in 8 cm
> and 10 cm , ones that need please get in touch with us.
> Our telephone number is : 86 -631 -5212246 fax : 86
> -631 -5212246 our postboxes are : sdwhsblyj3721@hotmail.
> com

1004. Re: 17 meter SSB project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 15:40:03 UTC
From: Mark Hall <vze2mhvc@bellatlantic.net>
Message-ID: <3C5D58B7.960E290E@bellatlantic.net>
Source record: 46746

Years ago, I bought a "150 Watt Boomer" CB amp at a yard sale for $15,
thinking I'd modify it for either 10 or 15 meters.

Bill Meara wrote:

> . I thought you guys would like to hear about my current
> project, a homebrew SSB rig for 17 meters.
>
> Most of the design is from an article in the British QRP magazine
> SPRAT (Nr.48) by Frank Lee, G3YCC (now a Silent Key). Solid State.
> Manhattan style construction. Junk box parts. My version generates
> the SSB at 5.173 Mhz. I had an old set of crystals from the filter
> and carrier oscillator in a Swan 240. The balanced modulator uses two
> diodes. After the filter there are two stages of amplification then
> the signal goes to an NE-602 mixer. The oscillator here is outboard
> to the NE-602. I upconvert to the operating frequency.
>
> That's how far I've gotten at this point. I'm looking around for RF
> Amp circuits that will take me up to around 25 watts. I want to stay
> with 12 Volts DC. Any suggestions? Are the kits based on Motorola
> circuit notesstill around? I also thought about adapting a 20 meter
> amp kit that Ramsey
> sells.
>
> Once I get the TX going, I might go ahead and make this rig a
> transceiver. I have plenty of room, because I'm building this thing on
> the chassis of an old DX-40. I'll also use the front panel and
> cabinet from the old Heath.
>
> 73 de Bill CU2JL (aka N2CQR)
> Sao Miguel Island
> The Azores, Portugal
> 37.7 N 25.6 W
> http://planeta.clix.pt/n2cqr

1005. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 15:53:21 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <a3jn3vldb1@slb7.atl.mindspring.net>
Source record: 46647
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

----- Original Message -----
"Richard Hosking" <zaprichardh@iinet.net.au(remove the zap)

WROTE:

>> SNIP <<

> I note the comments on the ERA-5 and current sinks
> to cancel regulator noise. This circuit should be
> used on the supply to the loop integrator

I would use the low noise power supply trick on both the loop filter components and a second one on the VCO itself. It's been my experience that any wide tuning range VCO is surprisingly sensitive to it's DC feeds and usually any sort of LC filter is not good enough.

You can use the same ultra low noise source for the loop filter and the VCO, it's just my habit to separate them so the current pulses of the charge pump can't sneak into the VCO.

One of the ones I dealt with had 14MHz/Volt sensitivity on the Vcc line... And of course, there were a hundred microvolts or so of 60 cycle getting through the normal regulator circuits.

Screwed up the output something fierce....

Jim Pennell

1006. WTB crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 17:12:25 UTC
From: James Skalski <jskalski@bellatlantic.net>
Message-ID: <3C5D2AC2.6000801@bellatlantic.net>
Source record: 46648

I need one each of the following:

3.3 Mhz
6.5 Mhz
10.5 Mhz
14.5 Mhz
17.5 Mhz
21.0 Mhz
24.5 Mhz
25.0 Mhz
25.5 Mhz
26.0 Mhz
--
73,

Jim n2go

1007. Re: Supply dry capsicum and do to sample in a large amount

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 18:31:19 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrna5r0fj.6m2.QSB@animas.frontier.net>
Source record: 46649

On Sun, 03 Feb 2002 15:37:46 GMT, Mark Hall scribbled:
> Good Grief.. Won't you Chinese Guys quit posting this CRAP on this news
> Group?? I'm not sure of Chinese customs.. but over here, it's RUDE as
> Hell to post unwanted msgs in a topic specific News Group. We call it
> SPAM!

Do you want to know what we call it when some Phule does a followup
to a spam post THAT THE SPAMMER WILL NEVER, EVER READ?

1008. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 18:44:40 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c5d8412.2615479@news.freeserve.net>
Source record: 46650

On 1 Feb 2002 08:10:45 -0800, remnan@hotmail.com (R.Narayanan) wrote:

>Hello,
>I would appreciate if anyone can give me information regarding
>availability of kit or pcb's for a universal SSB exciter using the
>9MHz Filter Method. The Solid State Design for the Radio Amateur
>(1995)had a project by TERRY A WHITE (KL71AK) which is of particulr
>interest to me.
>
RadCom, the UK RSGB rag, had an article in April-May 2000. It was
called the "Belthorne ssb if module". I don't think a kit of parts was
ever produced but I could be wrong.
atb Mike W, G8NXD, M3MSM qthr

1009. new relaise Qso Manager

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 20:37:42 UTC
From: Paolo Nossa <ik4clf@inwind.it>
Message-ID: <qch78.22810$om6.585272@news1.tin.it>
Source record: 46651
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,relcom.radi

www.qsl.net/ik4clf
HF QSO/QSL/Award managment, ADIF Import/Export, full version free to everybody.
Requires Access 97 or Access 2000 (with JPEG and TIFF filter installed), screen resolution 800x600/1024x768.
Includes: over 9500 logged QSO's for easy/quick testing of performance and 5 maps (Italy, Usa, Usa-Cal, Usa-Fla, Svalbard Is).
Full mapping (382 maps) available at Downloads page or free on request (CD-ROM).

1010. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 22:32:02 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0202031432.687aa560@posting.google.com>
Source record: 46652
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

"Richard Hosking" <zaprichardh@iinet.net.au(remove the zap)> wrote in message news:<3c5c9c97$0$20295@echo-01.iinet.net.au>...
> John
>
> This thread seems to have generated a bit of interest since I have been at
> the beach
> There is no reason why the 9852 could not be used as we are only using one
> output
> I have done some schematics which I have sent
> I can post these as GIF (5 files) if people want

> Richard

Yes, please post - we have been waiting to see them!

Regards,

Mike Monett
mrmonett@yahoo.com

1011. Warp-17 Programmer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-03 22:54:37 UTC
From: Barry Newberger <bnsbp@texas.net>
Message-ID: <bnsbp-9B87AC.16543903022002@news.texas.net>
Source record: 46653

Am looking for a Newfound Electronics Warp-17 PIC programmer.

Please respond via e-mail to w5kh@arrl.net.

Thanks,
Barry Newberger

1012. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 00:06:26 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0202031606.35619b8d@posting.google.com>
Source record: 46654

mike@corn2.freeserve.co.uk (Mike W) wrote in message
news:<3c5d8412.2615479@news.freeserve.net>...

> RadCom, the UK RSGB rag, had an article in April-May 2000. It was

> called the "Belthorne ssb if module". I don't think a kit of parts was

> ever produced but I could be wrong.

> atb Mike W, G8NXD, M3MSM qthr

I note that RadCom, QST and SPRAT have published a number
of relevant articles - analogue phasing rigs, DSP phasing
rigs, polyphase rigs, Weaver rigs, and so on.

Good as it is, a lot has happened since Solid State
Design was published. It would be silly to ignore
20+ years of technical development...

Laura Halliday VE7LDH "Que les nuages soient notre
Grid: CN89lg pied a terre..."
ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

1013. Re: bigger penis in 3 weeks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 00:49:04 UTC
From: Roger Conroy <rogerconroy@nospam.hotmail.com>
Message-ID: <a3klsr$i7t$1@ctb-nnrp2.saix.net>
Source record: 46655
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

will it increase the power rating as well? and what about the SWR?

"Another user" <at@btinternet.com> wrote in message
news:a3cvj2$p36$1@paris.btinternet.com...
> Will it work on my dipole hi from 40 to 80 over night
>
>
> "KC8JBO" <kc8jbo@alt.net> wrote in message
news:a2h93cmte0@pita.alt.net...
> >
> > <xphbtf@hotmail.com> wrote in message
> > news:8UU28.5126$2V3.17109@news.uswest.net...
> > > I found this interesting article on penis development:
> > >
> > > " Amazing excersise system to improve your sex life, increase your
> > > penis size, and help to reduce the risk of prostate cancer"
> > >
> > > The cost is less than $40.00 and seems good value, please if you
intend
> on
> > looking at this link,
> > > I will let you know that it is non-porn, however there are a few
> "graphic"
> > pics.
> > >
> > > go to http://zlap.to/pd11
> > > cya, Im off to bed now
> > > zzz
> >
> > Hey Stagger Lee and Arf arf!, there's hope for you two to save your
> > marriages yet, and you can afford to cash in $40 worth of your food
> stamps.
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>

1014. Re: bigger penis in 3 weeks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 02:01:40 UTC
From: KC8JBO <kc8jbo@alt.net>
Message-ID: <a3kr0l$1tm$1@pita.alt.net>
Source record: 46657
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

"Roger Conroy" <rogerconroy@nospam.hotmail.com> wrote in message
news:a3klsr$i7t$1@ctb-nnrp2.saix.net...
> will it increase the power rating as well? and what about the SWR?

LOL!!!!!!!!

> "Another user" <at@btinternet.com> wrote in message
> news:a3cvj2$p36$1@paris.btinternet.com...
> > Will it work on my dipole hi from 40 to 80 over night
> >
> >
> > "KC8JBO" <kc8jbo@alt.net> wrote in message
> news:a2h93cmte0@pita.alt.net...
> > >
> > > <xphbtf@hotmail.com> wrote in message
> > > news:8UU28.5126$2V3.17109@news.uswest.net...
> > > > I found this interesting article on penis development:
> > > >
> > > > " Amazing excersise system to improve your sex life, increase your
> > > > penis size, and help to reduce the risk of prostate cancer"
> > > >
> > > > The cost is less than $40.00 and seems good value, please if you
> intend
> > on
> > > looking at this link,
> > > > I will let you know that it is non-porn, however there are a few
> > "graphic"
> > > pics.
> > > >
> > > > go to http://zlap.to/pd11
> > > > cya, Im off to bed now
> > > > zzz
> > >
> > > Hey Stagger Lee and Arf arf!, there's hope for you two to save your
> > > marriages yet, and you can afford to cash in $40 worth of your food
> > stamps.
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1015. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 02:10:40 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C5DED79.17B@pop.removethistomailme.net>
Source record: 46656
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett wrote:
>
> "Richard Hosking" <zaprichardh@iinet.net.au(remove the zap)> wrote in message
news:<3c5c9c97$0$20295@echo-01.iinet.net.au>...
> > John
> >
> > This thread seems to have generated a bit of interest since I have been at
> > the beach
> > There is no reason why the 9852 could not be used as we are only using one
> > output
> > I have done some schematics which I have sent
> > I can post these as GIF (5 files) if people want
>
> > Richard
>
> Yes, please post - we have been waiting to see them!
>

We're still going back and forth on a couple of tweaks, so it might be a
few days before the schematics are fit for public consumption. I just
swapped out the 180 kHz ceramic filter for a 25 kHz crystal filter,
which thinned out the spur population dramatically (see two large
zipfiles at the bottom of http://www.qsl.net/ke5fx/synth.html), and
we'll probably go back and add one or two of Wenzel's power-supply
cleanup tricks to the VCO and loop-filter supply lines. We were also
debating whether to use the AD9852/4's built-in comparator versus the
separate LT1016, which works better with low-level input signals but
needs a separate package.

The preliminary schematics are very well-done, though -- Richard is
doing a great job on them.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1016. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 02:52:05 UTC
From: "Carl R. Stevenson" <wa6vse-shack@fast.net>
Message-ID: <3c5df7fe_2@news7.fast.net>
Source record: 46658

-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

"Laura Halliday" <marsgal42@hotmail.com> wrote in message
news:d42b5a72.0202031606.35619b8d@posting.google.com...
> mike@corn2.freeserve.co.uk (Mike W) wrote in message
news:<3c5d8412.2615479@news.freeserve.net>...
>
>
> > RadCom, the UK RSGB rag, had an article in April-May 2000. It was
>
> > called the "Belthorne ssb if module". I don't think a kit of parts
was
>
> > ever produced but I could be wrong.
>
> > atb Mike W, G8NXD, M3MSM qthr
>
>
> I note that RadCom, QST and SPRAT have published a number
> of relevant articles - analogue phasing rigs, DSP phasing
> rigs, polyphase rigs, Weaver rigs, and so on.
>
> Good as it is, a lot has happened since Solid State
> Design was published. It would be silly to ignore
> 20+ years of technical development...
>
> Laura Halliday VE7LDH "Que les nuages soient notre
> Grid: CN89lg pied a terre..."
> ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

Hello, Laura,

I agree ... it's silly to ignor 20+ years of technical development.

I saw mention of the MC1496 in an earlier post in this thread.

That was a pretty good device in 1975 when I was designing
military SSB gear for a living, but I wouldn't DREAM of using
it today, if for no other reason that I would be concerned about
the future availability of replacement parts 'cause it's so old.
I haven't checked, but after 25+ years, I'd be surprised if they're
still being produced.

73 and nice to see you on usenet ... it's been a while,

Carl - wa6vse

-----BEGIN PGP SIGNATURE-----
Version: PGP for Personal Privacy 5.5.3

iQA/AwUBPF33SZe+N6+q84HiEQJQOgCfSml5b3ySdnzQ9cPWSK3xWyKN0NsAoImf
RLbzDgD+Ivm6TPICuRPkmfby
=qis4
-----END PGP SIGNATURE-----

1017. Re: Homebrew Construction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 02:58:50 UTC
From: Ian Field <i.field@virgin.net>
Message-ID: <5Pm78.9709$XS6.1027198@news2-win.server.ntlworld.com>
Source record: 46659
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.components,sci.electronics.design,sci.electronics.misc,uk.radio.amateur

Probably doesn't know how to set up his mail-client so it doesn't try to download all messages at once - including subfolders & any attach', like the 338kb pdf I just uploaded for someone!

"Ralph Mowery" <rmowery@dialpoint.net> wrote in message news:3C48A508.90E42F82@dialpoint.net...
> I have the dial up and the web page loaded just fine for me. Maybe your
> stuff stinks ?
>
>
> Skipp wrote:
> >
> > Your web page stinks... I'm on the fiber and it takes too long to load.
> > Consider revamping the page with less hype if you want people to stay
> > around and look at it. I can't imagine the poor guy on a dial up ISP
> > wanting to waste the time waiting for your page to load.
> >
> > Next....!
> >
> > skipp
> > http://sonic.ucdavis.edu
> >
> > : In sci.electronics.basics pentode <pentode@ntlworld.com> wrote:
> > : If you are into homebrew radio/electronics construction,
> > : you may find the following URL interesting:
> > : www.copperisland.biz

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.320 / Virus Database: 179 - Release Date: 1/30/02

1018. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 03:02:55 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c5df935.15900102@news.freeserve.net>
Source record: 46668

On 3 Feb 2002 16:06:26 -0800, marsgal42@hotmail.com (Laura Halliday)
wrote:

>
>
>analogue phasing rigs, DSP phasing
>rigs, polyphase rigs, Weaver rigs, and so on.
>
none of the above are 9 mhz Filter type designs, which was what was
asked for, and therefore do not count in this instance. Even though
they are useful methods of generating SSB.

1019. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 03:37:20 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3C5E01F0.F2433175@sympatico.ca>
Source record: 46660

Well, you know, I work for an Advance Wireless Technology Group, and with
the exception of DSP and high performance ADCs and DACs (I'll through
DDS in there as well) the main advances I see are:

- readily available reasonably piced packaged mixers, e.g. SBL-1
- the ERA/MAV/MAR and similar amps, just add decoupling caps
and power.
- the abundance of inexpensive micro-processor crystals which several
people have turned into excellant crystal filters
- high performance OP AMPs. BurrBrown makes some with quite high
IP3s that don't drop off until 20 - 25 MHz.
- synthesizers and low noise oscillators for the LO

but you know, an op amp speech amplifier feeding a mixer with a simple
crystal oscillator couple with an ERA or MAR amp and a home brew crystal
filter makes a nice little modulator. If done right I would put it up against
the phasing method or weaver method. In fact this is what I've chosen for
my present project despite readily available samples of the best ADCs/DACs
and DSP systems available (and I don't just mean commercially).

If I really wanted to ride the the technology curve I would be using DSP -
for close in filtering and signal conditioning after some good analog filtering.
However a well designed analog receiver with good filters will out perform
a DSP based system unless it too has good analog filtering.

The fundementals of designing a good RF system just haven't changed
since Solid State Design for the Radio Amateur was first published.
We just substitute single chip components for the mixer and amplifiers these days.
The unfortunate thing in referencing Solid State Design for the Radio Amateur
is that so many of the parts are no longer manufactured, e.g MC1350 IF amp.

To me, its getting harder and harder to find good IF amps and AGC for the
receiver. ADI makes some but these are expensive. Who else makes
variable gain IF amps with the kind of performance suitable for high performance
HAM gear.

As for those cellular handsets, well they have integrated alot of analog stuff
together but their performance doesn't come anywhere close to a
decent HAM rig.

Bill Kirkland
VE3JHU

Laura Halliday wrote:

> mike@corn2.freeserve.co.uk (Mike W) wrote in message
news:<3c5d8412.2615479@news.freeserve.net>...

>
> > RadCom, the UK RSGB rag, had an article in April-May 2000. It was
>
> > called the "Belthorne ssb if module". I don't think a kit of parts was
>
> > ever produced but I could be wrong.
>
> > atb Mike W, G8NXD, M3MSM qthr
>
> I note that RadCom, QST and SPRAT have published a number
> of relevant articles - analogue phasing rigs, DSP phasing
> rigs, polyphase rigs, Weaver rigs, and so on.
>
> Good as it is, a lot has happened since Solid State
> Design was published. It would be silly to ignore
> 20+ years of technical development...
>
> Laura Halliday VE7LDH "Que les nuages soient notre
> Grid: CN89lg pied a terre..."
> ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

1020. Re: Homebrew Construction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 04:02:56 UTC
From: spagnet@austin.rr.com
Message-ID: <QJn78.95916$XZ1.4323890@typhoon.austin.rr.com>
Source record: 46661
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.components,sci.electronics.design,sci.electronics.misc,uk.radio.amateur
Body handling: HTML body converted to readable text

I'm on a cable modem and the page loaded fine for me. I'd say you have a problem with your 'fiber', your browser, or something other than the web page Skipp.

KI5XW/AE

"Ian Field" wrote in message
news:5Pm78.9709$XS6.1027198@news2-win.server.ntlworld.com...
> Probably doesn't know how to set up his mail-client so it doesn't try to
> download all messages at once - including subfolders & any attach', like
the
> 338kb pdf I just uploaded for someone!
>
>
> "Ralph Mowery" wrote in message
> news:3C48A508.90E42F82@dialpoint.net...
> > I have the dial up and the web page loaded just fine for me. Maybe your
> > stuff stinks ?
> >
> >
> > Skipp wrote:
> > >
> > > Your web page stinks... I'm on the fiber and it takes too long to
load.
> > > Consider revamping the page with less hype if you want people to stay
> > > around and look at it. I can't imagine the poor guy on a dial up ISP
> > > wanting to waste the time waiting for your page to load.
> > >
> > > Next....!
> > >
> > > skipp
> > > http://sonic.ucdavis.edu
> > >
> > > : In sci.electronics.basics pentode wrote:
> > > : If you are into homebrew radio/electronics construction,
> > > : you may find the following URL interesting:
> > > : www.copperisland.biz
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).

> Version: 6.0.320 / Virus Database: 179 - Release Date: 1/30/02
>
>

1021. Re: Homebrew Construction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 04:13:27 UTC
From: Mark <mark@lineisp.com>
Message-ID: <UUn78.4988$BU3.1058347@news6-win.server.ntlworld.com>
Source record: 46662
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.components,sci.electronics.design,sci.electronics.misc,uk.radio.amateur
Body handling: HTML body converted to readable text

"Ian Field" wrote in message
news:5Pm78.9709$XS6.1027198@news2-win.server.ntlworld.com...
> > I have the dial up and the web page loaded just fine for me. Maybe your
> > stuff stinks ?
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> > Skipp wrote:
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load.
> > > Consider revamping the page with less hype if you want people to stay
> > > around and look at it. I can't imagine the poor guy on a dial up ISP
> > > wanting to waste the time waiting for your page to load.

> Probably doesn't know how to set up his mail-client so it doesn't try to
> download all messages at once - including subfolders & any attach', like
the
> 338kb pdf I just uploaded for someone!
>
>
> "Ralph Mowery" wrote in message
> news:3C48A508.90E42F82@dialpoint.net...

1. At least he doesn't top-post (corrected on this reply) :) :)

2. I would guess it is a fair bet that MANY people do not faff about with
setting up mail clients. You visit a website, if it works it works, if it
doesn't you abandon it and visit a site which works with your default
settings.

I'm afraid expecting ANY potential purchaser / enquirer to go out of their
way to do business with someone is silly. In much the same way that many of
the new sites which INSIST you use FLASH plugins or toddle off - are finding
that, surprise of surprises, their "stickyness" decreases as their
competitors pages get the traffic.

It is staggering how many large corporations seem to employ "Sales
prevention officers" these days, sadly the little guys seem to be doing it
too now.

Mark

1022. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 04:57:25 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C5E149A.7F8D@pop.removethistomailme.net>
Source record: 46663

Bill Kirkland wrote:
>
> The fundementals of designing a good RF system just haven't changed
> since Solid State Design for the Radio Amateur was first published.
> We just substitute single chip components for the mixer and amplifiers these days.
> The unfortunate thing in referencing Solid State Design for the Radio Amateur
> is that so many of the parts are no longer manufactured, e.g MC1350 IF amp.

I'm not too worried about the good old MC1350P, myself. It is still available at a LOT of vendors -- findchips.com lists no fewer than seven vendors for it, most of whom actually have stock. I feel more comfortable using an MC1350P in a new circuit than, say, an ADF4112 phase detector chip, which is current production but available only directly from Analog unless you want to buy a tube of 96 from Future/Active.

I suspect the MC1350P will become "impossible" to find around the same time a 12BE6 does.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1023. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 05:01:28 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <IAo78.9803$zT.818894@bgtnsc06-news.ops.worldnet.att.net>
Source record: 46664

Hi Bill,
The Phillips TDA1572 is a good IF subsystem. This is the device
that is used in the AOR7030. It has a buffered 50 Ohm output for feeding an
SSB detector, and FM detector, etc. I have been using this device for a few
years. For an AM only receiver, the TDA1072 is a good choice. I played
around with the Analog Devices AD607 for awhile, but it is a very finicky
device to work with. The noise figure on the AD607 is pretty poor, at 18dB,
so I scrapped the idea of using that chip, in favor of the Phillips devices.
It seems that the cutting edge receivers are the software defined types.
Still on the drawing board at many companies, but Rockwell-Collins has a few
under their belt.

Pete KE9OA

Bill Kirkland <kirklandb@sympatico.ca> wrote in message
news:3C5E01F0.F2433175@sympatico.ca...
> Well, you know, I work for an Advance Wireless Technology Group, and with
> the exception of DSP and high performance ADCs and DACs (I'll through
> DDS in there as well) the main advances I see are:
>
> - readily available reasonably piced packaged mixers, e.g. SBL-1
> - the ERA/MAV/MAR and similar amps, just add decoupling caps
> and power.
> - the abundance of inexpensive micro-processor crystals which several
> people have turned into excellant crystal filters
> - high performance OP AMPs. BurrBrown makes some with quite high
> IP3s that don't drop off until 20 - 25 MHz.
> - synthesizers and low noise oscillators for the LO
>
> but you know, an op amp speech amplifier feeding a mixer with a simple
> crystal oscillator couple with an ERA or MAR amp and a home brew crystal
> filter makes a nice little modulator. If done right I would put it up
against
> the phasing method or weaver method. In fact this is what I've chosen for
> my present project despite readily available samples of the best ADCs/DACs
> and DSP systems available (and I don't just mean commercially).
>
> If I really wanted to ride the the technology curve I would be using DSP -
> for close in filtering and signal conditioning after some good analog
filtering.
> However a well designed analog receiver with good filters will out perform
> a DSP based system unless it too has good analog filtering.
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> The fundementals of designing a good RF system just haven't changed
> since Solid State Design for the Radio Amateur was first published.

> We just substitute single chip components for the mixer and amplifiers
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> The unfortunate thing in referencing Solid State Design for the Radio
Amateur
> is that so many of the parts are no longer manufactured, e.g MC1350 IF
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> To me, its getting harder and harder to find good IF amps and AGC for the
> receiver. ADI makes some but these are expensive. Who else makes
> variable gain IF amps with the kind of performance suitable for high
performance
> HAM gear.
>
> As for those cellular handsets, well they have integrated alot of analog
stuff
> together but their performance doesn't come anywhere close to a
> decent HAM rig.
>
> Bill Kirkland
> VE3JHU
>
>
> Laura Halliday wrote:
>
> > mike@corn2.freeserve.co.uk (Mike W) wrote in message
news:<3c5d8412.2615479@news.freeserve.net>...
> >
> > > RadCom, the UK RSGB rag, had an article in April-May 2000. It was
> >
> > > called the "Belthorne ssb if module". I don't think a kit of parts was
> >
> > > ever produced but I could be wrong.
> >
> > > atb Mike W, G8NXD, M3MSM qthr
> >
> > I note that RadCom, QST and SPRAT have published a number
> > of relevant articles - analogue phasing rigs, DSP phasing
> > rigs, polyphase rigs, Weaver rigs, and so on.
> >
> > Good as it is, a lot has happened since Solid State
> > Design was published. It would be silly to ignore
> > 20+ years of technical development...
> >
> > Laura Halliday VE7LDH "Que les nuages soient notre
> > Grid: CN89lg pied a terre..."
> > ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte
>

1024. Re: Smallest QRP Rig?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 05:05:20 UTC
From: Olaf <olaf@mail.powermax-lcd.com>
Message-ID: <svqr5u4ai4ercem7tsg8u6p4uoj3hloa2h@4ax.com>
Source record: 46665

On Fri, 01 Feb 2002 19:19:44 GMT, "Sverre Holm \(LA3ZA\)"
<la3za@qsl.net> wrote:

>http://www.knightlites.org/new_page_6.htm
"Seems" interesting, but almost all images (except logo and morse key
on the front page) are missing here, so navigation is a bit hard and I
can't access the schematics at all. Anyone having the same problem?

73! de Olaf

1025. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 07:20:17 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0202032320.7715caec@posting.google.com>
Source record: 46666
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3C5DED79.17B@pop.removethistomailme.net>...
> Mike Monett wrote:

> > Yes, please post - we have been waiting to see them!

> We're still going back and forth on a couple of tweaks, so it might be a
> few days before the schematics are fit for public consumption. I just
> swapped out the 180 kHz ceramic filter for a 25 kHz crystal filter,
> which thinned out the spur population dramatically (see two large
> zipfiles at the bottom of http://www.qsl.net/ke5fx/synth.html), and
> we'll probably go back and add one or two of Wenzel's power-supply
> cleanup tricks to the VCO and loop-filter supply lines. We were also
> debating whether to use the AD9852/4's built-in comparator versus the
> separate LT1016, which works better with low-level input signals but
> needs a separate package.
>
> The preliminary schematics are very well-done, though -- Richard is
> doing a great job on them.
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

Looks like you are really making progress!

I am still unclear on the overall architecture. You mentioned using a
mixer in a previous post, but I don't have a picture of the overall
block diagram in my mind to see how the loop works and what role the
DDS plays.

The 25KHz filter means the DDS is restricted to a narrow tuning range,
presumably around 10.7MHz. My problem is trying to figure out how the
loop acquires when you do a large frequency step. If the DDS is driven
from the 1 to 2GHz vco through a divide-by-n, the output of the DDS
will fall outside the filter bandpass and you will lose the signal
into the pll. But this does not seem to be the configuration you
described.

I'm sure the schematics will explain the mystery, so I'll be patient
while you dig for those last few dB:)

Best Regards,

Mike Monett
mrmonett@yahoo.com

1026. Re: Homebrew Construction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 07:29:27 UTC
From: Ian Field <i.field@virgin.net>
Message-ID: <ZMq78.5591$BU3.1169259@news6-win.server.ntlworld.com>
Source record: 46667
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.components,sci.electronics.design,sci.electronics.misc,uk.radio.amateur
Body handling: HTML body converted to readable text

"Mark" wrote in message
news:UUn78.4988$BU3.1058347@news6-win.server.ntlworld.com...
> "Ian Field" wrote in message
> news:5Pm78.9709$XS6.1027198@news2-win.server.ntlworld.com...
> > > I have the dial up and the web page loaded just fine for me. Maybe
your
> > > stuff stinks ?
> > >
> > >
> > > Skipp wrote:
> > > >
> > > > Your web page stinks... I'm on the fiber and it takes too long to
> load.
> > > > Consider revamping the page with less hype if you want people to
stay
> > > > around and look at it. I can't imagine the poor guy on a dial up
ISP
> > > > wanting to waste the time waiting for your page to load.
>
> > Probably doesn't know how to set up his mail-client so it doesn't try to
> > download all messages at once - including subfolders & any attach', like
> the
> > 338kb pdf I just uploaded for someone!
> >
> >
> > "Ralph Mowery" wrote in message
> > news:3C48A508.90E42F82@dialpoint.net...
> >
> >
> 1. At least he doesn't top-post (corrected on this reply) :) :)
>
> 2. I would guess it is a fair bet that MANY people do not faff about
with
> setting up mail clients. You visit a website, if it works it works, if it
> doesn't you abandon it and visit a site which works with your default
> settings.
>
> I'm afraid expecting ANY potential purchaser / enquirer to go out of their
> way to do business with someone is silly. In much the same way that many
of
> the new sites which INSIST you use FLASH plugins or toddle off - are

finding
> that, surprise of surprises, their "stickyness" decreases as their
> competitors pages get the traffic.
>
> It is staggering how many large corporations seem to employ "Sales
> prevention officers" these days, sadly the little guys seem to be doing it
> too now.
>
> Mark
>
>
>

So what can be done about "flash-harry" - apart from just ignore them and move on, as they seem to want all their potential customers to do?! One website I visited proudly boasted "automation experts", they got very snotty when I pointed out the difficulty their Flash-Harry pluggin caused - a couple of weeks later I got a "denial of service" attach virus simultaneously e-mailed to me along with everyone else in their address book, they were most indignant when I pointed this out to them and I had to explain several times before they understood that there was a problem!

BTW: I try to get away with not bottom-posting for as long as possible, I can see the point about having to read up & down to follow the context - but an increasing number of people seem to be interleaving paragraphs just lately, which rapidly congeals into an even worse untidy mess! My argument against bottom-posting is; it takes 5 times longer to read all the messages in a thread if you have to keep switching between which pain (sorry - pane!) to scroll down!

And I certainly hope the individual with the .edu domain - is one of the student's who's yet to learn and not one of the tutors who one would expect to have already done a bit of learning!

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.320 / Virus Database: 179 - Release Date: 1/30/02

1027. Re: bigger penis in 3 weeks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 08:41:19 UTC
From: Walt Davidson <walt99@tiscali.co.uk>
Message-ID: <8khs5u8evf6jv1akn44nnc41bjkdnk3f75@4ax.com>
Source record: 46669
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

On Mon, 4 Feb 2002 02:49:04 +0200, "Roger Conroy"
<rogerconroy@nospam.hotmail.com> wrote:

>will it increase the power rating as well? and what about the SWR?

I think you will find 7 inches is resonant as a half-wave at about 432
MHz! Final adjustments are made by progressively snipping small
pieces off the stub.

73 de G3NYY

--
Walt Davidson Email: g3nyy @freeuk.com

1028. Re: bigger penis in 3 weeks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 12:39:35 UTC
From: KC8JBO <kc8jbo@alt.net>
Message-ID: <a3m1do$5q5$2@dosa.alt.net>
Source record: 46670
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

"Walt Davidson" <walt99@tiscali.co.uk> wrote in message
news:8khs5u8evf6jv1akn44nnc41bjkdnk3f75@4ax.com...
> On Mon, 4 Feb 2002 02:49:04 +0200, "Roger Conroy"
> <rogerconroy@nospam.hotmail.com> wrote:
>
> >will it increase the power rating as well? and what about the SWR?
>
> I think you will find 7 inches is resonant as a half-wave at about 432
> MHz! Final adjustments are made by progressively snipping small
> pieces off the stub.
>
> 73 de G3NYY
>
> --
> Walt Davidson Email: g3nyy @freeuk.com

LOL!!!!!!

1029. Re: Smallest QRP Rig?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 13:28:47 UTC
From: " .Your Friend Bill" <none@coqui.net>
Message-ID: <3C5E8C8F.6F745E70@coqui.net>
Source record: 46671

Olaf wrote:
>
> On Fri, 01 Feb 2002 19:19:44 GMT, "Sverre Holm \(LA3ZA\)"
> <la3za@qsl.net> wrote:
>
> >http://www.knightlites.org/new_page_6.htm
> "Seems" interesting, but almost all images (except logo and morse key
> on the front page) are missing here, so navigation is a bit hard and I
> can't access the schematics at all. Anyone having the same problem?
>
> 73! de Olaf

There's a .htm in the middle of name of the .gif links for all the
icons. My browser certainly doesn't like that. (Netscape 4.77)
-Bill

1030. Re: Smallest QRP Rig?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 13:48:16 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0202040548.2425fc28@posting.google.com>
Source record: 46672

Yes, I have noticed that, Roy. One of the complaints I have about QRP is that most QRPers seem to equate low performance with QRP. Was playing with my TS930 the other day, and it can easily get down to 1 watt (although I don't trust the power meter at that level). That's certainly high performance QRP. With some of the new ICs out now it would be possible to have some decent performance in a compact package.

What prompted my original post was the article in CQ (Feb. 2002) concerning 'survival radio'. The author wants to have another competition about small size radios and personal beacons, perhaps only a fraction of an inch in volume.

And, yes, I fully realize that a compact rig is more of a novelty, but if you can actually use it, so much the better.

Jim
N8EE

Roy Lewallen <w7el@eznec.com> wrote in message
news:<3C5CB421.87B08C94@eznec.com>...
> Michael makes an important point -- people often sacrifice a lot of
> quality for small size. The "Optimized" QRP transceiver I described in
> August 1980 QST catches attention because of its size, but no compromise
> of any kind was made in its performance for the sake of size. It's a
> very usable rig, which I still have, and it's worked all states (all
> confirmed) and 33 countries -- in addition to providing countless hours
> of ragchewing. (It didn't take 20 years to work the states and countries
> -- that was done many years ago now.) But small is cute. One of the
> cutest I've seen was a rig built into a 9 volt rectangular battery
> shell. I have no idea how it might have performed.
>
> Roy Lewallen, W7EL
>
> Michael Black wrote:
> >
> > I think the biggest consideration is how small components you
> > can get, and your own skill at shoehorning it into a small space.
> >
> > Roy Lewellan has described some very small rigs in QST, and no,
> > they weren't just the very simplest. From the photos, he's
> > put some effort into getting it all very small.
> >
> > You could throw together something extremely simple, but other
> > than the novelty of "the smallest rig", and people have been

> > doing this over the years, would you really be happy with the
> > performance? Unless you just want novelty, you probably
> > want a little more circuitry, and then the question is
> > getting it into a small space, rather than starting with
> > a simple rig.
> >
> > One thing people wrote about thirty years ago was that
> > useability goes down as size decreases. So you can squeeze
> > the circuitry into a small space, but you may have problems
> > manipulating the knobs, or finding panel space for the
> > knobs and controls you need.
> >
> > I think some of the most practical tiny equipment that I've
> > seen has been focused on rigs people have built to
> > take into the wilderness. Wes Hayward described the Micromountaneer
> > in QST years ago, and he intended it for this purpose. It
> > was small enough for his backpacking needs, but it was also
> > a useable piece of equipment. It was a direct conversion receiver,
> > and VXO controlled transmitter.
> >
> > Michael VE2BVW

1031. Re: Homebrew Construction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 13:52:13 UTC
From: Ban <bansuri@masterweb.it>
Message-ID: <a3m3m7dcf1@serv1.iunet.it>
Source record: 46673
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.components,sci.electronics.design,sci.electronics.misc,uk.radio.amateur
Body handling: HTML body converted to readable text

I'm on a V90modem and the page loaded in 15seconds.
quite useful stuff, 15pounds though

ciao Ban

"Ian Field" schrieb im Newsbeitrag
news:5Pm78.9709$XS6.1027198@news2-win.server.ntlworld.com...
> Probably doesn't know how to set up his mail-client so it doesn't try to
> download all messages at once - including subfolders & any attach', like
the
> 338kb pdf I just uploaded for someone!
>
>
> "Ralph Mowery" wrote in message
> news:3C48A508.90E42F82@dialpoint.net...
> > I have the dial up and the web page loaded just fine for me. Maybe your
> > stuff stinks ?
http://www.copperisland.biz/

1032. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 17:01:05 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0202040901.17f9ecc@posting.google.com>
Source record: 46674

mike@corn2.freeserve.co.uk (Mike W) wrote in message
news:<3c5df935.15900102@news.freeserve.net>...

> On 3 Feb 2002 16:06:26 -0800, marsgal42@hotmail.com (Laura Halliday)

> wrote:

>
> >analogue phasing rigs, DSP phasing

> >rigs, polyphase rigs, Weaver rigs, and so on.

> >

> none of the above are 9 mhz Filter type designs, which was what was

> asked for, and therefore do not count in this instance. Even though

> they are useful methods of generating SSB.

That is not at all clear - my reading was that the
original poster was looking to build an SSB exciter
and had found one that looked promising. That he
wanted to build the exact design from Solid State
Design is not at all clear, and in 2002 there
are better (certainly more reproducable) ways of
doing it.

Laura Halliday VE7LDHï¿½ï¿½ï¿½ï¿½ "Que les nuages soient notre
Grid: CN89lgï¿½ï¿½ï¿½ï¿½

1033. Calculating coils for 120mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 18:05:50 UTC
From: "john.bean1" <john.bean1@ntlworld.com>
Message-ID: <e3A78.12557$XS6.1653481@news2-win.server.ntlworld.com>
Source record: 46675

Hello to everyone

Could someone please help me?? I am trying to calculate the required number of turns needed for a coil to be resonant at 120 MHz. I have tried 2 formula's , one comes up with 0.246 turns and the other is 0.803 turns. Clearly this is wrong as you can not have a coil with a 0.2 or 0.8 turn. Could someone possibly tell me where I am going wrong!

1034. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 18:08:41 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C5ECF07.4F9D@pop.removethistomailme.net>
Source record: 46676
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett wrote:
>
> I am still unclear on the overall architecture. You mentioned using a
> mixer in a previous post, but I don't have a picture of the overall
> block diagram in my mind to see how the loop works and what role the
> DDS plays.

The DDS is the loop reference. The worst-case DDS tuning range required to bridge the gap between N (programmable PLL division factor) steps is simply DDS_freq / Nmin.

Currently I'm running the ADF4112 with Nmin=654 (the reference divider R stays at 7), so the required DDS tuning range is about 16 kHz end to end. Once I bump the DDS down a couple kHz to account for the crystal filter's behavior in my circuit, transformers, it fits into the response curve pretty well (http://www.qsl.net/ke5fx/synth/DDSRANGE.GIF).

>
> The 25KHz filter means the DDS is restricted to a narrow tuning range,
> presumably around 10.7MHz. My problem is trying to figure out how the
> loop acquires when you do a large frequency step. If the DDS is driven
> from the 1 to 2GHz vco through a divide-by-n, the output of the DDS
> will fall outside the filter bandpass and you will lose the signal
> into the pll. But this does not seem to be the configuration you
> described.

Nope, the DDS is driven by a fixed clock -- it's used as a real DDS, not a fractional-N divider. Its output never leaves the range in blue in the plot above. Inside the PLL loop, there's nothing except the VCO, PD chip with its programmable N divider, and the OP27-based loop filter that's required to interface the two. Pretty simple stuff.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1035. Re: Homebrew Construction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 18:23:46 UTC
From: Patch <bob_acord@msn.com>
Message-ID: <qiA78.4240$Q9.913005@twister.kc.rr.com>
Source record: 46677
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.components,sci.electronics.design,sci.electronics.misc,uk.radio.amateur
Body handling: HTML body converted to readable text

I'm on cable and it took 5 seconds to load up. Maybe I'm missing something?

"Ian Field" wrote in message
news:5Pm78.9709$XS6.1027198@news2-win.server.ntlworld.com...
> Probably doesn't know how to set up his mail-client so it doesn't try to
> download all messages at once - including subfolders & any attach', like
the
> 338kb pdf I just uploaded for someone!
>
>
> "Ralph Mowery" wrote in message
> news:3C48A508.90E42F82@dialpoint.net...
> > I have the dial up and the web page loaded just fine for me. Maybe your
> > stuff stinks ?
> >
> >
> > Skipp wrote:
> > >
> > > Your web page stinks... I'm on the fiber and it takes too long to
load.
> > > Consider revamping the page with less hype if you want people to stay
> > > around and look at it. I can't imagine the poor guy on a dial up ISP
> > > wanting to waste the time waiting for your page to load.
> > >
> > > Next....!
> > >
> > > skipp
> > > http://sonic.ucdavis.edu
> > >
> > > : In sci.electronics.basics pentode wrote:
> > > : If you are into homebrew radio/electronics construction,
> > > : you may find the following URL interesting:
> > > : www.copperisland.biz
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.320 / Virus Database: 179 - Release Date: 1/30/02
>
>

1036. Re: Calculating coils for 120mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 18:35:47 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u5tl3nm1iv9ia6@corp.supernews.com>
Source record: 46678

(a) If you are looking for a self-resonant coil, the answer is one thing. If you are looking to resonate the coil with a capacitor, the answer is quite different. The answer also revolves around the diameter of the coil and the wire size. How about a little more information.

(b) Why are we winding a coil for the middle of the aircraft com band on a ham newsgroup?

Jim

"john.bean1" <john.bean1@ntlworld.com> wrote in message news:e3A78.12557$XS6.1653481@news2-win.server.ntlworld.com...
> Hello to everyone
>
> Could someone please help me?? I am trying to calculate the required number
> of turns needed for a coil to be resonant at 120 MHz. I have tried 2
> formula's , one comes up with 0.246 turns and the other is 0.803 turns.
> Clearly this is wrong as you can not have a coil with a 0.2 or 0.8 turn.
> Could someone possibly tell me where I am going wrong!
>
>

1037. Re: Use of Relays

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 18:39:57 UTC
From: KA9CAR <nospam@nospam.usa>
Message-ID: <a3mke4$1lo6$1@news1.tribune.com>
Source record: 46679

Measure the current draw on 24 vac
use a resistor to drop the current draw at 12 vdc to no more than the 24vac value.
KA9CAR

Harry Williams <harry.w.williams@syntegra.com> wrote in message news:3C5BED36.BD9F608B@syntegra.com...
> I am constructing a matching network for a vertical and will need to use some
> relays to control the matching configuration. I have 2 relays that have a 24VAC
> coil. It appears that the relays pull just fine using 12VDC. Can I use CD to energize
> a relay whose coil specifies AC? In general is there a preference, DC or AC, in this
> type of application? I guess I am thinking of induced noise during receive if I use
> AC but maybe that is not an issue since most of the old dowkey coaxial relays used
> 110VAC coil. Any thoughts on this would be appreciated.
>
> Thanks,
> Harry - W0PIY
>

1038. Re: Dentron GL-1000 need help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 18:55:20 UTC
From: Skipp <skipp@pilotNOSPAMPLEASE.ucdavis.edu>
Message-ID: <a3mleo$10f$2@woodrow.ucdavis.edu>
Source record: 46696

You can find my dentron GLA 1000 text on the http://sonic.ucdavis.edu
Amateur Radio Page.

First (after checking all the obvious things)
I would check for no signal idle current when the amplifier is in the
transmit mode.

The GLA-1000 is a potential pain in the pazzoo to repair. If you provide
more information, I'll be happy to help you.

cheers

skipp@pilotNOSPAMPLEASE.ucdavis.edu

take the NOSPAMPLEASE out of my Email address to reply.

1039. Re: Calculating coils for 120mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 19:07:33 UTC
From: "john.bean1" <john.bean1@ntlworld.com>
Message-ID: <0ZA78.13055$XS6.1725001@news2-win.server.ntlworld.com>
Source record: 46680

a)I am looking to resonat it with a veriable capacitor the wire is 22swg with a diameter of 1/4 inch air spaced.

b) To answer your question I was advised that there are many skilled and knowledgeable folk in this news group who are constructors and have the ability to help me!!If I am in the wrong place kindly advise me of where I should go and I shall move along. Wondering why in the aviation band, simple because I am restoring a valve nav/com transceiver and I need a generator in that band, I only have access to a 25 MHz generator and I can't afford a new one. And yes I am licensed for that frequency!

So I would welcome anyone who is willing to help.

thanks
John

1040. Re: bigger penis in 3 weeks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 19:10:43 UTC
From: Beach Bum <hmbdude@nospamcotse.com>
Message-ID: <MPG.16c87c9195058f809896b1@news.onlynews.com>
Source record: 46681
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

In article <8khs5u8evf6jv1akn44nnc41bjkdnk3f75@4ax.com>,
walt99@tiscali.co.uk says...
> On Mon, 4 Feb 2002 02:49:04 +0200, "Roger Conroy"
> <rogerconroy@nospam.hotmail.com> wrote:
>
> >will it increase the power rating as well? and what about the SWR?
>
> I think you will find 7 inches is resonant as a half-wave at about 432
> MHz! Final adjustments are made by progressively snipping small
> pieces off the stub.
>
> 73 de G3NYY

Err, Walt, sorry to disillusion you, but that's only a quarterwave at
432. A halfwave at 432 would be worth to see!

1041. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 20:35:19 UTC
From: Beach Bum <hmbdude@nospamcotse.com>
Message-ID: <MPG.16c8905ea20897e59896b2@news.onlynews.com>
Source record: 46682

Did all the Plessey parts die out? Somewhere I have an unused (untested too) Plessey IC based ssb transceiver board that I built years ago from a kit.

Steve

In article <IAo78.9803$zT.818894@bgtnsc06-news.ops.worldnet.att.net>, n.gianakopoulos@worldnet.att.net says...
> Hi Bill,
> The Phillips TDA1572 is a good IF subsystem. This is the device
> that is used in the AOR7030. It has a buffered 50 Ohm output for feeding an
> SSB detector, and FM detector, etc. I have been using this device for a few
> years. For an AM only receiver, the TDA1072 is a good choice. I played
> around with the Analog Devices AD607 for awhile, but it is a very finicky
> device to work with. The noise figure on the AD607 is pretty poor, at 18dB,
> so I scrapped the idea of using that chip, in favor of the Phillips devices.
> It seems that the cutting edge receivers are the software defined types.
> Still on the drawing board at many companies, but Rockwell-Collins has a few
> under their belt.
>
> Pete KE9OA
>
> Bill Kirkland <kirklandb@sympatico.ca> wrote in message
> news:3C5E01F0.F2433175@sympatico.ca...
> > Well, you know, I work for an Advance Wireless Technology Group, and with
> > the exception of DSP and high performance ADCs and DACs (I'll through
> > DDS in there as well) the main advances I see are:
> >
> > - readily available reasonably piced packaged mixers, e.g. SBL-1
> > - the ERA/MAV/MAR and similar amps, just add decoupling caps
> > and power.
> > - the abundance of inexpensive micro-processor crystals which several
> > people have turned into excellant crystal filters
> > - high performance OP AMPs. BurrBrown makes some with quite high
> > IP3s that don't drop off until 20 - 25 MHz.
> > - synthesizers and low noise oscillators for the LO
> >
> > but you know, an op amp speech amplifier feeding a mixer with a simple
> > crystal oscillator couple with an ERA or MAR amp and a home brew crystal
> > filter makes a nice little modulator. If done right I would put it up
> against
> > the phasing method or weaver method. In fact this is what I've chosen for
> > my present project despite readily available samples of the best ADCs/DACs
> > and DSP systems available (and I don't just mean commercially).
> >

> > If I really wanted to ride the the technology curve I would be using DSP -
> > for close in filtering and signal conditioning after some good analog
> filtering.
> > However a well designed analog receiver with good filters will out perform
> > a DSP based system unless it too has good analog filtering.
> >
> > The fundementals of designing a good RF system just haven't changed
> > since Solid State Design for the Radio Amateur was first published.
> > We just substitute single chip components for the mixer and amplifiers
> these days.
> > The unfortunate thing in referencing Solid State Design for the Radio
> Amateur
> > is that so many of the parts are no longer manufactured, e.g MC1350 IF

1042. Re: bigger penis in 3 weeks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 20:37:42 UTC
From: Walt Davidson <walt99@tiscali.co.uk>
Message-ID: <u6st5uola04j6i8bf9a2c8hvijm143hohd@4ax.com>
Source record: 46683
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

On Mon, 4 Feb 2002 11:10:43 -0800, Beach Bum <hmbdude@nospamcotse.com>
wrote:

>Err, Walt, sorry to disillusion you, but that's only a quarterwave at
>432. A halfwave at 432 would be worth to see!

Oops ... yes, you are right! (I was never one to boast ...)

;-)
73 de G3NYY

--
Walt Davidson Email: g3nyy @freeuk.com

1043. Re: Calculating coils for 120mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 22:33:11 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <772n3a.tsp.ln@my.linux.box>
Source record: 46684

In article <e3A78.12557$XS6.1653481@news2-win.server.ntlworld.com>, john.bean1 wrote:
> Hello to everyone
>
> Could someone please help me?? I am trying to calculate the required number
> of turns needed for a coil to be resonant at 120 MHz. I have tried 2
> formula's , one comes up with 0.246 turns and the other is 0.803 turns.
> Clearly this is wrong as you can not have a coil with a 0.2 or 0.8 turn.
> Could someone possibly tell me where I am going wrong!

Hello John,

About 6 turns on a 1/4 inch (6mm) former will give you 100nH .
This will be resonant at 120MHz if you use a 17.5pF capacitor -
this is well within the range of your 4 to 40pF trimmer.

Check out Reg Edwards (G4FGQ) web-site for coil design and other
useful software. You will find a link to it on my web-page (see .sig below).

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

1044. February Specials from Sauder Electronics at www.sauderelectronics.com!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 22:40:29 UTC
From: specials@sauderelectronics.com
Message-ID: <8614bb9a.0202041440.10b8bdeb@posting.google.com>
Source record: 46685

Hello everyone,

Just a note to let everyone know that we have new specials up for our Internet customers on the website. Here are the current specials:

http://www.sauderelectronics.com

__Pack of 10 Silver Teflon PL259s__
Pack of 10 Silver teflon PL259 with gold tip for RG8 coax (accepts reducer for smaller cable).
* ONLY $8.00 *

__3 ft. RG8X Jumper w/PL259__
$1.00 off 3ft. RG8X jumper cable w/PL259 connector. American made w/95% braid. Reg. $5.00.
* NOW ONLY $4.00 *

__SMA Dual Band HT Antenna__
Dual Band antenna for SMA handhelds. 2M and 440MHz antenna fits the newer handheld radios like Yaesu VX-5 and many others requiring the SMA type connection. Very flexible.
Regularly sells for $14.00.......now ONLY $12.00!

PLUS A FREE GIFT with any order over $25.00!!

No one beats our prices on accessories and connectors!

Thanks for looking,

Sauder Electronics
http://www.sauderelectronics.com

1045. WTB: Instruction Sheet For Use With The Cahill-Thomas Sanity Meter, Series JM-14 (Manual)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 22:54:52 UTC
From: Richard Daventry <newsgps_email@ntlworld.com>
Message-ID: <diE78.14585$XS6.1937037@news2-win.server.ntlworld.com>
Source record: 46686

Found the sanity meter at a boot sale, but missing instructions.

1046. Re: Smallest QRP Rig?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 22:55:51 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u5u4hg3vodhhac@corp.supernews.com>
Source record: 46687

"JLB" <jim.bolinger@lintek.aeroflex.com> wrote in message
news:8d5ec8a2.0202040548.2425fc28@posting.google.com...
> Yes, I have noticed that, Roy. One of the complaints I have about QRP
> is that most QRPers seem to equate low performance with QRP.

Boy I take exception to that.

Different QRP rigs have different design points. Some are designed to be as small as possible, and these do tend to have low performance. Many are designed for backpacking and low power consumption is important. These rigs will dramatically outperform your TS930 with respect to power consumption, but they may sacrifice a bit in receiver performance to get it. Others go for receiver performance, and will often have power consumption more similar to your 930 but often with a better receiver. Performance depends on what's important.

There are a wide variety of QRP rigs out there with all sorts of targets. What they don't tend to target is the bazillions of bells and whistles market which is adequately served by the Yaecomwood rigs. If lots of buttons and and features, obscene power consumption, and high price is your idea of "performance", then probably few of the QRP rigs are high performance.

QRPers tend to be a technical lot, and they do fixate on some specs more than others. You will find few QRP rigs with receiver sensitivity much higher than necessary, because this tends to involve a tradeoff in TOIP, which, operationally, tends to be much more important. Some of the low receiver power rigs will go the other way, because you gotta give up the TOIP for the low power consumption and lots of unuseable sensitivity comes along for the ride. But if you look at QRP rigs with higher receive power useage, they will tend to have far better receivers than your 930.

These aren't just sterile numbers. Operate one of these rigs next to your Yaecomwood in tough conditions, say a contest, and unless your rice box is one of the three grand variety, say a 756ProII or something like that, the little QRP box will run circles around it.

Transmitters are a slightly different matter. Spurious rejection comes at a cost in power and weight, and most QRP rigs tend to not be a lot better than they need to be. There are exceptions, of course, many designers take pride in producing a clean output, but there are limits to what they are willing to pay in power consumption, heat and weight.

Of course, there are some that are just plain poorly designed, but they certainly aren't in the majority.

There are some features I admit it would be nice to have on my QRP rigs, scratchpad memory, for instance. On the other hand, I would really like for my rice box to have a keyer as nice as Elecraft's. But each designer has his own idea of what's important.

..

1047. Re: Smallest QRP Rig?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-04 23:01:22 UTC
From: "Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net>
Message-ID: <44036D4C56BACCE6.FFD540828AFF19DC.AAE0CDF86F582515@lp.airnews.net>
Source record: 46688

On Mon, 04 Feb 2002 13:05:20 +0800, Olaf <olaf@mail.powermax-lcd.com>
wrote:

>On Fri, 01 Feb 2002 19:19:44 GMT, "Sverre Holm \(LA3ZA\)"
><la3za@qsl.net> wrote:
>
>>http://www.knightlites.org/new_page_6.htm
>"Seems" interesting, but almost all images (except logo and morse key
>on the front page) are missing here, so navigation is a bit hard and I
>can't access the schematics at all. Anyone having the same problem?

Same problem with IE6, and it gives a 404 not found whenever I try to
go directly to the pics.

Joe Bramblett, KD5NRH
kd5nrh@kd5nrh.net

1048. Re: Calculating coils for 120mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 00:05:02 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u5u8dd5a0g2ddf@corp.supernews.com>
Source record: 46689

"john.bean1" <john.bean1@ntlworld.com> wrote in message
news:0ZA78.13055$XS6.1725001@news2-win.server.ntlworld.com...

> a)I am looking to resonat it with a veriable capacitor

If we don't know the range of the capacitor, it makes it rather difficult to help.

the wire is 22swg
> with a diameter of 1/4 inch air spaced.

I'm not familiar with swg. What is the relationship between swg and awg?

>
> b) To answer your question I was advised that there are many skilled and
> knowledgeable folk in this news group who are constructors and have the
> ability to help me!!

That is probably true.

If I am in the wrong place kindly advise me of where I
> should go and I shall move along. Wondering why in the aviation band, simple
> because I am restoring a valve nav/com transceiver and I need a generator in
> that band, I only have access to a 25 MHz generator and I can't afford a new
> one. And yes I am licensed for that frequency!

I don't know any person that is "licensed for that frequency" in this country. I can't speak to other country's laws. In this country, the aircraft is the one licensed for the frequency and the operator has either a restricted third class or no operator's license at all. Since '96, the aircraft doesn't require a license either unless travelling out of the country.

Why not just use the fifth harmonic of the 25 MHz. generator? You are working with a receiver with a sensitivity of a couple of microvolts. Certainly there will be enough harmonic content to provide a usable signal for testing.

Jim

1049. Re: Calculating coils for 120mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 01:03:58 UTC
From: la8ak.xnd@online.no
Message-ID: <3c5f137f.21745849@news.online.no>
Source record: 46690

On Mon, 4 Feb 2002 18:05:50 -0000, "john.bean1"
<john.bean1@ntlworld.com> wrote:

>Hello to everyone
>
>Could someone please help me?? I am trying to calculate the required number
>of turns needed for a coil to be resonant at 120 MHz. I have tried 2
>formula's , one comes up with 0.246 turns and the other is 0.803 turns.
>Clearly this is wrong as you can not have a coil with a 0.2 or 0.8 turn.
>Could someone possibly tell me where I am going wrong!
>
>
try 7 or 8 turns No.18 SWG copper wire with 0.2"ID with 40pF trimmer
capacitor, I usually wind on a drill or other round rod

--
remove ,xnd to reply

1050. Re: Calculating coils for 120mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 01:48:18 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3C5F39E2.D496053@sympatico.ca>
Source record: 46691

You still haven't answered the question from a previous post, what capacitance, i.e. what is the value of the variable capacitor?

If you are trying to use the standard 365 pf variable at 120 MHz you will probably find that the required inductance is way too low to be practical.

Check the ARRL Handbook.

"john.bean1" wrote:

> a)I am looking to resonat it with a veriable capacitor the wire is 22swg
> with a diameter of 1/4 inch air spaced.
>
> b) To answer your question I was advised that there are many skilled and
> knowledgeable folk in this news group who are constructors and have the
> ability to help me!!If I am in the wrong place kindly advise me of where I
> should go and I shall move along. Wondering why in the aviation band, simple
> because I am restoring a valve nav/com transceiver and I need a generator in
> that band, I only have access to a 25 MHz generator and I can't afford a new
> one. And yes I am licensed for that frequency!
>
> So I would welcome anyone who is willing to help.
>
> thanks
> John

1051. FS: Heathkit Manuals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 03:14:43 UTC
From: Stephen Gale <stephengale@sympatico.ca>
Message-ID: <m6I78.14087$I37.1264014@news20.bellglobal.com>
Source record: 46692
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

have the following manuals

Heathkit VOM Model MM-1
Lafayette Rx Model HA-7000
Heathkit Frequency Counter Model IM-4100
Heathkit AC Power Supply Model HWA-202-1
Heathkit Acoustic Suspension Speaker System Model AS-10
Heathkit Cantenna Dummy RF Load Model HN-31
Heathkit Hybrid Phone Patch model HD-15

feel free to make an offer on all or any one...these are the org assembly manuals not copies

1052. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 04:38:57 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0202042038.7c26dd4d@posting.google.com>
Source record: 46693

marsgal42@hotmail.com (Laura Halliday) wrote in message
news:<d42b5a72.0202040901.17f9ecc@posting.google.com>...
> mike@corn2.freeserve.co.uk (Mike W) wrote in message
news:<3c5df935.15900102@news.freeserve.net>...
>
>
> > none of the above are 9 mhz Filter type designs, which was what was
> > asked for, and therefore do not count in this instance. Even though
> > they are useful methods of generating SSB.
>
> That is not at all clear - my reading was that the
> original poster was looking to build an SSB exciter
> and had found one that looked promising. That he
> wanted to build the exact design from Solid State
> Design is not at all clear, and in 2002 there
> are better (certainly more reproducable) ways of
> doing it.
>
The original poster has an Indian call, so I assume that's
where he is. That would probably impact on his choice.
One reason he might have been asking for a kit is so he
doesn't have to order from multiple places.

I have no idea how things are now, but years ago Indian
hams had quite a problem getting equipment and parts,
due to import issues. Some of the more interesting
articles I read in the ham magazines thirty years ago
were from Indian hams, as they described things they'd
built and mentioned some of the effort in procuring parts
and making do with what they could.

From a standpoint of scrounging parts, that rig in
Solid State for Radio Amateurs is probably a far safer
bet than a lot of more recent designs. It is a straightforward
design, using standard parts (except, that premixer with the
TI doubler balanced mixer). To copy it, one might have
to do a few substitutes on the MOSFETs and power bipolars,
but it may be easier finding some sort of suitable power
transistor than trying to find some fancy and recent IC.

That rig isn't unique, though, and there were plenty of similar
rigs described in the ham magazines around the same time.

One of the big costs, no matter what design is chosen, is
going to be that crystal filter. I haven't seen prices

for KVG filters recently (I gather they are still available
new), but they'd always be the most expensive component in
a rig, be it now or 25 years ago. That's why the popularity
of making ladder filters with cheap crystals.

A better choice might be a rig that used a ladder filter. Or
if someone who's already set up to sort crystals sent him
a matched set of crystals, then building a rig around that.

There's always a trade-off. Someone who feels they need to
buy a kit, and follow a design will likely pay more than someone
who can extract the basics from a design, and then use what
is readily, and cheaply, available. For someone in the latter
position, that "Universal rig" is a good start; use a homemade
ladder filter with what crystals are readily available locally (and
thus change the IF to the frequency where the crystals are, and
perhaps suffer a bit if the IF is a bad choice), find some bipolars
that can work in the circuit, and then order what isn't locally
available from Dan's Small Parts. Though I didn't check,
it looks like most of the parts, or reasonable substitutes
could be had there (except for that TI mixer!), except for
the crystal filter. And he lists a set of matched crystals for
a ladder filter.

Michael VE2BVW

1053. Re: Smallest QRP Rig?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 06:02:48 UTC
From: Olaf <olaf@mail.powermax-lcd.com>
Message-ID: <pelu5u876c16u2be59d4nhefm4e4bp8mmv@4ax.com>
Source record: 46694

On Mon, 04 Feb 2002 17:01:22 -0600, "Joe Bramblett, KD5NRH"
<kd5nrh@kd5nrh.net> wrote:

>On Mon, 04 Feb 2002 13:05:20 +0800, Olaf <olaf@mail.powermax-lcd.com>
>wrote:
>>can't access the schematics at all. Anyone having the same problem?
>
>Same problem with IE6, and it gives a 404 not found whenever I try to
>go directly to the pics.
>
I sent a mail to N4HAY and await the response. Would be really bad if
one would have to use a certain browser (and version) only to see a
schematic...

73! de Olaf

1054. Soldering Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 07:18:24 UTC
From: J Titcomb <kimoloka@hawaii.rr.com>
Message-ID: <4HL78.13177$lb.2741039@typhoon.hawaii.rr.com>
Source record: 46695
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Aloha, anyone got any suggestions for soldering weathered stranded wire? I'm trying to revive my G5RV which blew down during the last storm here. I've tried wire brushing it, sanding it, using flux...none of these work. Is there some homebrew secret for cleaning corrosion from copper wire, making it like new so it can be soldered? Some acid wash or something? Mahalo, I appreciate the help.

Jim KH6IX

1055. Re: Soldering Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 07:27:22 UTC
From: "." <sp@m.not>
Message-ID: <3C5F8997.B0ADB57B@m.not>
Source record: 46597
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Years ago I had a paste that you would dip the wire into and then remove it with an industrial wipe.. From the way I remember it stinging if you got some on your hand it was acid based. I'm not sure how good an idea it would be to use it on stranded wire but it worked great for removing varnish off solid wire when I worked doing electronic assembly and had to wire transformer leads to a circuit board.

I suspect some would cringe at this but I'd probably try a bit of diluted pool acid (HCl - muriatic acid) and then wash it well with water and dry it. I think rubber gloves and eye protection would be a VERY GOOD idea if doing this.

J Titcomb wrote:

> Aloha, anyone got any suggestions for soldering weathered stranded wire? I'm
> trying to revive my G5RV which blew down during the last storm here. I've
> tried wire brushing it, sanding it, using flux...none of these work. Is
> there some homebrew secret for cleaning corrosion from copper wire, making
> it like new so it can be soldered? Some acid wash or something? Mahalo, I
> appreciate the help.
>
> Jim KH6IX

1056. Re: Soldering Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 08:32:43 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <a3o5bb$f85$9@quark.scn.rain.com>
Source record: 46598
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

In rec.radio.amateur.antenna J Titcomb <kimoloka@hawaii.rr.com> wrote:
> Aloha, anyone got any suggestions for soldering weathered stranded wire? I'm
> trying to revive my G5RV which blew down during the last storm here. I've
> tried wire brushing it, sanding it, using flux...none of these work. Is
> there some homebrew secret for cleaning corrosion from copper wire, making
> it like new so it can be soldered? Some acid wash or something? Mahalo, I
> appreciate the help.

Wire brushing to shiny copper should be sufficient - as should sanding.
The problem may be the solders they sell these days, that contain little
or no lead.

You might try talking to a plumber, and see what they use - although
their fluxes may be acid, which you really wouldn't want on an electrical
circuit.

I have several pounds of 60:40 tin/lead solder. I have never had any problem
soldering copper with it, even copper that has an oxide coating.

--
Bill Nelson (billn@peak.org)

1057. Re: Soldering Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 08:57:55 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c5f9c42.3665305@news.freeserve.net>
Source record: 46603
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Tue, 5 Feb 2002 08:32:43 +0000 (UTC), Bill Nelson
<billn@spock.peak.org> wrote:

>In rec.radio.amateur.antenna J Titcomb <kimoloka@hawaii.rr.com> wrote:
>> Aloha, anyone got any suggestions for soldering weathered stranded wire? I'm
>> trying to revive my G5RV which blew down during the last storm here. I've
>> tried wire brushing it, sanding it, using flux...none of these work. Is
>> there some homebrew secret for cleaning corrosion from copper wire, making
>> it like new so it can be soldered? Some acid wash or something? Mahalo, I
>> appreciate the help.
>
>Wire brushing to shiny copper should be sufficient - as should sanding.
>The problem may be the solders they sell these days, that contain little
>or no lead.
>
>You might try talking to a plumber, and see what they use - although
>their fluxes may be acid, which you really wouldn't want on an electrical
>circuit.
>
Plumbers flux is acidic, some more than others (IIRC eutectic is the
nastiest one) but all are neutralised by water.
I too have experienced problems with corroded copper aerial wire and I
tried plumbers flux, as I were one and had some old stock of the
stuff. It did'nt work no how, even when shiney clean. For some reason
the wire just wont tin, and yes I was using 60/40 I also tried
plumbers 'wiping' solder which is a slightly different melting point.
I've given up on trying and just waiting for the next rally to buy
replacement HD Copper.
not much help, sorry. Mike W, G8NXD, M3MSM qthr

1058. Re: Calculating coils for 120mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 09:27:10 UTC
From: "john.bean1" <john.bean1@ntlworld.com>
Message-ID: <0AN78.896$ET2.127617@news11-gui.server.ntli.net>
Source record: 46599

"Bill Kirkland" <kirklandb@sympatico.ca> wrote in message
news:3C5F39E2.D496053@sympatico.ca...
> You still haven't answered the question from a previous post, what
capacitance,
> i.e. what is the value of the variable capacitor?
>
> If you are trying to use the standard 365 pf variable at 120 MHz you will
> probably find that the required inductance is way too low to be practical.
>
> Check the ARRL Handbook.
>
Sorry Bill

The Capacitor that I have managed to obtain is from 2 to 26 pf , a variable
for fm use, and I have also tried using a 40pf trimmer.

Would these change the inductance greatly??

John

1059. Re: Calculating coils for 120mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 09:40:02 UTC
From: "john.bean1" <john.bean1@ntlworld.com>
Message-ID: <UKN78.933$ET2.134033@news11-gui.server.ntli.net>
Source record: 46600

hi Jim

the nearest match for 22SWG (Standard wire gauge) to AWG (American wire gauge) is 21 AMG, a wire diameter of 0.028 inch or 0.71 mm.

john

1060. Re: Soldering Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 10:39:43 UTC
From: VK2KCE <vk2kce@dingoblue.net.au>
Message-ID: <3c5fb5ca$0$27725$afc38c87@news.optusnet.com.au>
Source record: 46601
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I have used a mixture of vinegar and salt, soak the wire end in the mixture
and the corrosion will be dissolved!! wash off the mixture with water and
solder it!! Easy!!
John McLean
VK2KCE

"J Titcomb" <kimoloka@hawaii.rr.com> wrote in message
news:4HL78.13177$Ib.2741039@typhoon.hawaii.rr.com...
> Aloha, anyone got any suggestions for soldering weathered stranded wire?
I'm
> trying to revive my G5RV which blew down during the last storm here. I've
> tried wire brushing it, sanding it, using flux...none of these work. Is
> there some homebrew secret for cleaning corrosion from copper wire, making
> it like new so it can be soldered? Some acid wash or something? Mahalo, I
> appreciate the help.
>
> Jim KH6IX
>
>

1061. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 11:08:41 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <pfeo3a.ddq.ln@my.linux.box>
Source record: 46618

In article <MPG.16c8905ea20897e59896b2@news.onlynews.com>, Beach Bum wrote:
> Did all the Plessey parts die out? Somewhere I have an unused (untested
> too) Plessey IC based ssb transceiver board that I built years ago from a
> kit.

The Plessey 600 series IC's date back to the 1960's. They
are now obsolete. Analog devices make some useful IC's
http://www.analog.com

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

1062. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 11:22:21 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <d9fo3a.ddq.ln@my.linux.box>
Source record: 46619

In article <6447bcd3.0202042038.7c26dd4d@posting.google.com>, Michael Black wrote:

> From a standpoint of scrounging parts, that rig in
> Solid State for Radio Amateurs is probably a far safer
> bet than a lot of more recent designs. It is a straightforward
> design, using standard parts (except, that premixer with the
> TI doubler balanced mixer).

It is possible to build a good SSB exciter using 'standard' components.
My current rig has a dual op-amp as the mic amp, a pair of 1N4148
diodes as the balanced modulator and a few bipolar transistors
for the carrier oscillators. I used a crystal filter from a
scrap CB. As Michael suggests, a crystal ladder filter is
another good option.

See Aleksander Stare's web-page for some ladder filter designs.
http://lea.hamradio.si/~s57nan

See my SSB exciter at:
http://homepage.eircom.net/~ei9gq/amp-mod.html

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

1063. Re: Soldering Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 11:36:27 UTC
From: KC8JBO <kc8jbo@alt.net>
Message-ID: <a3ohmm$al6$0@pita.alt.net>
Source record: 46602
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

"J Titcomb" <kimoloka@hawaii.rr.com> wrote in message
news:4HL78.13177$Ib.2741039@typhoon.hawaii.rr.com...
> Aloha, anyone got any suggestions for soldering weathered stranded wire?
I'm
> trying to revive my G5RV which blew down during the last storm here. I've
> tried wire brushing it, sanding it, using flux...none of these work. Is
> there some homebrew secret for cleaning corrosion from copper wire, making
> it like new so it can be soldered? Some acid wash or something? Mahalo, I
> appreciate the help.
>
> Jim KH6IX

Did you try Brasso?

1064. Re: Soldering Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 13:05:08 UTC
From: w4pqwhs@aol.com
Message-ID: <20020205080508.25527.00001291@mb-ci.aol.com>
Source record: 46604

>Aloha, anyone got any suggestions for soldering weathered stranded wire?

I have used the circuit board etchant sold by Radio Shack..You will be able to tell if it is working in a minute or so.. 73 Hal W4PQW

1065. Jennings vacuum variable

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 14:48:29 UTC
From: Frank <Frank@nospam.net>
Message-ID: <3C5FF11F.7070903@nospam.net>
Source record: 46605

Model CVCH-1000-5N885. 7-1000 pf 5 KV.
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1330802831

1066. Re: Soldering Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 15:35:57 UTC
From: Bill Turner <w7ti@dslextreme.com>
Message-ID: <tpuv5ugspumpiju7f13ppc0ffomto0corj@4ax.com>
Source record: 46606
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Tue, 05 Feb 2002 07:18:24 GMT, "J Titcomb" <kimoloka@hawaii.rr.com>
wrote:

>Aloha, anyone got any suggestions for soldering weathered stranded wire? I'm
>trying to revive my G5RV which blew down during the last storm here.

Sanding or wire brushing down to bare copper should be enough. One
thing to avoid is acid-based flux on stranded wire. The acid will wick
between the strands and will be near impossible to remove completely.

Picture what will happen with acid trapped between the strands over a
period of time. :-(

73, Bill W7TI

1067. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 16:42:13 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0202050842.79668c3b@posting.google.com>
Source record: 46607

blackm00@cam.org (Michael Black) wrote in message
news:<6447bcd3.0202042038.7c26dd4d@posting.google.com>...

> The original poster has an Indian call, so I assume that's

> where he is. That would probably impact on his choice.

> One reason he might have been asking for a kit is so he

> doesn't have to order from multiple places.
..

Good points all, but, with all due respect: you're not
the original poster, and cannot possibly know exactly
what he had in mind.

I too have heard horror stories, but recent events
(like the establishment of AMSAT-VU) suggest that
the situation is not as dire as it once was. The
mere presence of VU calls in this newsgroup suggests
this too .

Laura Halliday VE7LDHï¿½ï¿½ï¿½ï¿½ "Que les nuages soient notre
Grid: CN89lgï¿½ï¿½ï¿½ï¿½

1068. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 16:42:14 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0202050842.3313a211@posting.google.com>
Source record: 46608

blackm00@cam.org (Michael Black) wrote in message
news:<6447bcd3.0202042038.7c26dd4d@posting.google.com>...

> The original poster has an Indian call, so I assume that's

> where he is. That would probably impact on his choice.

> One reason he might have been asking for a kit is so he

> doesn't have to order from multiple places.
..

Good points all, but, with all due respect: you're not
the original poster, and cannot possibly know exactly
what he had in mind.

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(like the establishment of AMSAT-VU) suggest that
the situation is not as dire as it once was. The
mere presence of VU calls in this newsgroup suggests
this too .

Laura Halliday VE7LDHï¿½ï¿½ï¿½ï¿½ "Que les nuages soient notre
Grid: CN89lgï¿½ï¿½ï¿½ï¿½

1069. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 16:42:14 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0202050842.64e43ad4@posting.google.com>
Source record: 46609

blackm00@cam.org (Michael Black) wrote in message
news:<6447bcd3.0202042038.7c26dd4d@posting.google.com>...

> The original poster has an Indian call, so I assume that's

> where he is. That would probably impact on his choice.

> One reason he might have been asking for a kit is so he

> doesn't have to order from multiple places.
..

Good points all, but, with all due respect: you're not
the original poster, and cannot possibly know exactly
what he had in mind.

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(like the establishment of AMSAT-VU) suggest that
the situation is not as dire as it once was. The
mere presence of VU calls in this newsgroup suggests
this too .

Laura Halliday VE7LDHï¿½ï¿½ï¿½ï¿½ "Que les nuages soient notre
Grid: CN89lgï¿½ï¿½ï¿½ï¿½

1070. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 16:42:15 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0202050842.6abca713@posting.google.com>
Source record: 46611

blackm00@cam.org (Michael Black) wrote in message
news:<6447bcd3.0202042038.7c26dd4d@posting.google.com>...

> The original poster has an Indian call, so I assume that's

> where he is. That would probably impact on his choice.

> One reason he might have been asking for a kit is so he

> doesn't have to order from multiple places.
..

Good points all, but, with all due respect: you're not
the original poster, and cannot possibly know exactly
what he had in mind.

I too have heard horror stories, but recent events
(like the establishment of AMSAT-VU) suggest that
the situation is not as dire as it once was. The
mere presence of VU calls in this newsgroup suggests
this too .

Laura Halliday VE7LDHï¿½ï¿½ï¿½ï¿½ "Que les nuages soient notre
Grid: CN89lgï¿½ï¿½ï¿½ï¿½

1071. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 16:42:15 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0202050842.45eb2d92@posting.google.com>
Source record: 46612

blackm00@cam.org (Michael Black) wrote in message
news:<6447bcd3.0202042038.7c26dd4d@posting.google.com>...

> The original poster has an Indian call, so I assume that's

> where he is. That would probably impact on his choice.

> One reason he might have been asking for a kit is so he

> doesn't have to order from multiple places.
..

Good points all, but, with all due respect: you're not
the original poster, and cannot possibly know exactly
what he had in mind.

I too have heard horror stories, but recent events
(like the establishment of AMSAT-VU) suggest that
the situation is not as dire as it once was. The
mere presence of VU calls in this newsgroup suggests
this too .

Laura Halliday VE7LDHï¿½ï¿½ï¿½ï¿½ "Que les nuages soient notre
Grid: CN89lgï¿½ï¿½ï¿½ï¿½

1072. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 16:42:16 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0202050842.19c9fb5c@posting.google.com>
Source record: 46610

blackm00@cam.org (Michael Black) wrote in message
news:<6447bcd3.0202042038.7c26dd4d@posting.google.com>...

> The original poster has an Indian call, so I assume that's

> where he is. That would probably impact on his choice.

> One reason he might have been asking for a kit is so he

> doesn't have to order from multiple places.
..

Good points all, but, with all due respect: you're not
the original poster, and cannot possibly know exactly
what he had in mind.

I too have heard horror stories, but recent events
(like the establishment of AMSAT-VU) suggest that
the situation is not as dire as it once was. The
mere presence of VU calls in this newsgroup suggests
this too .

Laura Halliday VE7LDHï¿½ï¿½ï¿½ï¿½ "Que les nuages soient notre
Grid: CN89lgï¿½ï¿½ï¿½ï¿½

1073. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 16:42:20 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0202050842.1f4c3370@posting.google.com>
Source record: 46613

blackm00@cam.org (Michael Black) wrote in message
news:<6447bcd3.0202042038.7c26dd4d@posting.google.com>...

> The original poster has an Indian call, so I assume that's

> where he is. That would probably impact on his choice.

> One reason he might have been asking for a kit is so he

> doesn't have to order from multiple places.
..

Good points all, but, with all due respect: you're not
the original poster, and cannot possibly know exactly
what he had in mind.

I too have heard horror stories, but recent events
(like the establishment of AMSAT-VU) suggest that
the situation is not as dire as it once was. The
mere presence of VU calls in this newsgroup suggests
this too .

Laura Halliday VE7LDHï¿½ï¿½ï¿½ï¿½ "Que les nuages soient notre
Grid: CN89lgï¿½ï¿½ï¿½ï¿½

1074. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 16:42:25 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0202050842.5a4d650d@posting.google.com>
Source record: 46614

blackm00@cam.org (Michael Black) wrote in message
news:<6447bcd3.0202042038.7c26dd4d@posting.google.com>...

> The original poster has an Indian call, so I assume that's

> where he is. That would probably impact on his choice.

> One reason he might have been asking for a kit is so he

> doesn't have to order from multiple places.
..

Good points all, but, with all due respect: you're not
the original poster, and cannot possibly know exactly
what he had in mind.

I too have heard horror stories, but recent events
(like the establishment of AMSAT-VU) suggest that
the situation is not as dire as it once was. The
mere presence of VU calls in this newsgroup suggests
this too .

Laura Halliday VE7LDHï¿½ï¿½ï¿½ï¿½ "Que les nuages soient notre
Grid: CN89lgï¿½ï¿½ï¿½ï¿½

1075. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 16:42:27 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0202050842.6859d132@posting.google.com>
Source record: 46615

blackm00@cam.org (Michael Black) wrote in message
news:<6447bcd3.0202042038.7c26dd4d@posting.google.com>...

> The original poster has an Indian call, so I assume that's

> where he is. That would probably impact on his choice.

> One reason he might have been asking for a kit is so he

> doesn't have to order from multiple places.
..

Good points all, but, with all due respect: you're not
the original poster, and cannot possibly know exactly
what he had in mind.

I too have heard horror stories, but recent events
(like the establishment of AMSAT-VU) suggest that
the situation is not as dire as it once was. The
mere presence of VU calls in this newsgroup suggests
this too .

Laura Halliday VE7LDHï¿½ï¿½ï¿½ï¿½ "Que les nuages soient notre
Grid: CN89lgï¿½ï¿½ï¿½ï¿½

1076. Re: WTB: Instruction Sheet For Use With The Cahill-Thomas Sanity Meter, Series JM-14 (Manual)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 18:44:41 UTC
From: mikea@mikea.ath.cx
Message-ID: <tKV78.20936$Or5.3172976782@newssvr16.news.prodigy.com>
Source record: 46616

Richard Daventry <newsgps_email@ntlworld.com> wrote:
: Found the sanity meter at a boot sale, but missing instructions.

What _is_ this device? It sounds like something to be found at
the tinfoil-hat store.

--
Offhand, I'd say you need to clean your guns in front of your CPU salesman.
-- Matthew Stitt, in bit.listserv.ibm-main

1077. SSB Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 19:03:11 UTC
From: Kevin <rfman@xtra.co.nz>
Message-ID: <3C602C6F.D1F7E723@xtra.co.nz>
Source record: 46617

Looking for information on XF-10A filter used in Yaesu ft221 and ft225
Thanks
Kevin

1078. Re: WTB: Instruction Sheet For Use With The Cahill-Thomas Sanity Meter, Series JM-14 (Manual)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 19:27:41 UTC
From: Richard Daventry <newsgps_email@ntlworld.com>
Message-ID: <slW78.2431$ET2.489342@news11-gui.server.ntli.net>
Source record: 46620

I've managed to find a torn portion of the Instruction Sheet and it reads:

"
..in relation to the present statistical norm.

3. EXPLANATION OF NUMBERS ZERO TO THREE

On this model, as on all Sanity Meters, Zero is the theoreticaly perfect
sanity point. Everything above zero is regarded as a deviation from the
norm. However, zero is a statistical rather than an actual idea. The
normalcy range of ...(cannot read)... lies between zero and three. Any
rating in
this area is considered normal.

4. EXPLANATION OF NUMBERS FOUR TO SEVEN

These numbers represent the sanity-tolerance limit. Persons registering in
this area should consult ...

"Mike Andrews" <mikea@mikea.ath.cx> wrote in message
news:tKV78.20936$Or5.3172976782@newssvr16.news.prodigy.com...
> Richard Daventry <newsgps_email@ntlworld.com> wrote:
> : Found the sanity meter at a boot sale, but missing instructions.
>
> What _is_ this device? It sounds like something to be found at
> the tinfoil-hat store.

1079. Glue Metal to Plastic ?/

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 19:44:41 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c60355c.353103544@news.erols.com>
Source record: 46621

I want to fix a metal pedastal to a wooden base and screws/bolts
are not an option. Is there a fixative/glue that will do the job? It's
for the coil mount for a one-off crystal set and does not need to be
" industrial strength."

TIA,

Andrew
Reticulum

Remove "your.hat" when replying via e-mail

1080. Re: Instruction Sheet For Use With The Cahill-Thomas Sanity Meter, Series JM-14 (Manual)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 19:55:25 UTC
From: Richard Daventry <newsgps_email@ntlworld.com>
Message-ID: <gLW78.2527$ET2.504425@news11-gui.server.ntli.net>
Source record: 46622

The Meter is 6" wide, 4" tall and 6" deep. Lower right hand corner is a switch, having an "On" position and "Operate". The meter shows a straight-line scale (from left to right) numbered zero to ten. After warming up it shows a reading of 9.9.

1081. IC 207h data connector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 19:55:44 UTC
From: Stuart Galt <stuart.a.galt@boeing.com>
Message-ID: <3C6038BF.10C59361@boeing.com>
Source record: 46623

Hello,

Hopefully, this is the right place. I would like to build my own software for programming my 207 and my handhelds. I found the CI-v interface information on the web (http://www.plicht.de/ekki/civ/) and was wondering if this is what the 207h uses?

If not could someone please direct me to where I could find the specs, an SDK or library...

I am also interested in the T81A, W32 and T7H as well.

Any pointers would be greatly apreciated.
Thanks in advance

Stuart
<stuart.a.galt@boeing.com>

1082. Re: Glue Metal to Plastic ?/

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 20:15:49 UTC
From: Glenn Pederson <gpeder@elnet.com>
Message-ID: <u60fcn98l6fu4d@corp.supernews.com>
Source record: 46624

This might help:

http://www.thistothat.com/cgi-bin/glue.cgi?lang=en&this=Metal&that=Wood

"Reticulum" <Cathexis@yourhaterols.com> wrote in message
news:3c60355c.353103544@news.erols.com...
> I want to fix a metal pedastal to a wooden base and screws/bolts
> are not an option. Is there a fixative/glue that will do the job? It's
> for the coil mount for a one-off crystal set and does not need to be
> " industrial strength."
>
> TIA,
>
> Andrew
> Reticulum
>
> Remove "your.hat" when replying via e-mail

1083. Re: SSB Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 20:21:36 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <a3pesg$r3u$1@helle.btinternet.com>
Source record: 46625

"Kevin" <rfman@xtra.co.nz> wrote in message
news:3C602C6F.D1F7E723@xtra.co.nz...
> Looking for information on XF-10A filter used in Yaesu ft221 and ft225
> Thanks
> Kevin

Probably made by KVG in Germany. I think they were recently taken over.

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.con
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

1084. Pixie 2 Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 20:52:06 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0202051252.3c27809f@posting.google.com>
Source record: 46626

I posted a question the other day asking what the 'smallest' QRP trransceiver was.

From what I can find on the net, the Pixie 2 and variants is probably the simplest (although not the best performance).

My question now is, why is a PI network used at the output?

I would think that a link coupled parallel LC in the amplifier collector lead would help reduce spurs, both transmit and receive. It would also eliminate 1 coil and 1 capacitor, as it would replace the choke in the collector path.

Or would this not work when in receive mode?

In general I wonder why parallel tuned tanks are not used more often in simple rigs because of the inherent bandpass characteristics (less AM BCB spurs).

Jim
N8EE

1085. Re: Pixie 2 Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 21:59:28 UTC
From: "Sverre Holm (LA3ZA)" <la3za@qsl.net>
Message-ID: <4BY78.940$HL2.19915@news2.ulv.nextra.no>
Source record: 46627

Jim,

This is a good question. If you take a look at one of the very first ancestors of the Pixie, the Micro 80, in the G-QRP Pixie files at http://www.qrpp-i.com/pixie2.htm you will see that Oleg Borodin, RV3GM (in 1987-1992) used a parallel tuned circuit as a tank circuit only. I have seen other versions where the output is taken from a tap of the coil rather than from the collector of the output transistor, I would guess for better impedance matching.

Sverre
LA3ZA
www.qsl.net/la3za

"JLB" <jim.bolinger@lintek.aeroflex.com> wrote in message news:8d5ec8a2.0202051252.3c27809f@posting.google.com...
> I posted a question the other day asking what the 'smallest' QRP
> trransceiver was.
>
> From what I can find on the net, the Pixie 2 and variants is probably
> the simplest (although not the best performance).
>
> My question now is, why is a PI network used at the output?
>
> I would think that a link coupled parallel LC in the amplifier
> collector lead would help reduce spurs, both transmit and receive. It
> would also eliminate 1 coil and 1 capacitor, as it would replace the
> choke in the collector path.
>
> Or would this not work when in receive mode?
>
> In general I wonder why parallel tuned tanks are not used more often
> in simple rigs because of the inherent bandpass characteristics (less
> AM BCB spurs).
>
> Jim
> N8EE

1086. Re: Glue Metal to Plastic ?/

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 22:11:18 UTC
From: "G. Skiffington" <skiffing@nbnet.nb.ca>
Message-ID: <3C608E51.14A5@nbnet.nb.ca>
Source record: 46628

Any number of the common epoxy glues available through your local building supplies/hardware/auto jobber will do the job just fine. Typically (with nearly anything) ensure the surfaces are oil/grease free and free of anything loose which may scale off (you'd be gluing to this scale otherwise).....Room temperature or a little warm is best for a good cure.....mechanically support the items being glued if you can (or put the structure in a secure place while it's "balancing").

Have fun....Keep on tinkering.....THAT...is Real Ham Radio

73 - Gord VE1AJF

1087. Re: AD9854-driven PLL (was Re: DDS cleanup using PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 22:31:47 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0202051431.21d10e73@posting.google.com>
Source record: 46629
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3C5ECF07.4F9D@pop.removethistomailme.net>...

[...]

> Currently I'm running the ADF4112 with Nmin=654 (the reference divider R
> stays at 7), so the required DDS tuning range is about 16 kHz end to
> end. Once I bump the DDS down a couple kHz to account for the crystal
> filter's behavior in my circuit, transformers, it fits into the response
> curve pretty well (http://www.qsl.net/ke5fx/synth/DDSRANGE.GIF).

[...]

> Nope, the DDS is driven by a fixed clock -- it's used as a real DDS, not
> a fractional-N divider. Its output never leaves the range in blue in
> the plot above. Inside the PLL loop, there's nothing except the VCO, PD
> chip with its programmable N divider, and the OP27-based loop filter
> that's required to interface the two. Pretty simple stuff.
>
> -- jm

Hi John,

Thanks for your reply. I finally downloaded the datasheet on the
ADF4112, and everything is clear now.

For those who haven't bought the QEX CD yet, the article "Designing
Low-Phase-Noise Oscillators," by Ulrich L. Rohde, QEX, October 1994
is at

http://www2.arrl.org/ard/files/rohde94.pdf

Figure 15 shows massively-parallel varactors used in a tapped
Hartley FET vco.

I found Ulrich L. Rohde is Chairman of Synergy Microwave Corp.,
Paterson, NJ 07504. Some of his articles are available at

http://www.synergymwave.com/publications/Index.htm

Here is a brief description of some interesting points in the
articles:

"Synthesizers design for microwave applications"

http://www.synergymwave.com/publications/PDF/Synthesizers.pdf

Figure 28 shows a custom-built phase detector with a noise floor of better than -168dBc/Hz. However, the schematic has errors. The 'D' input for FD3 has no connection to the output of any gate or flop.

As the caption for figure 36 shows, the crossover point between the multiplied phase noise and the 4GHz oscillator determines the best loop bandwidth.

"Oscillator basics and low-noise techniques for microwave oscillators and VCO's."

http://www.synergymwave.com/publications/PDF/Oscillators.pdf

"Figure 15. Modified Colpitts oscillator with a dc-stabilizing circuit that monitors the emitter current of the oscillator transistor. Since the stabilizing transistor is dc-coupled, it can be used as a feedback circuit to reduce the phase noise from dc to about 1 MHz off the carrier. This approach is independent of the operating frequency and the device itself, and therefore can be used for FETs as well as bipolar transistors. It solves the fT nonlinearities pointed out in Figure 7."

"Recent advances in linear VCO calculations, VCO design and spurious analyses of Fractional-N synthesizers."

http://www.synergymwave.com/publications/PDF/LinearVco0600.pdf

Figure 7 shows the predicted phase noise of an 880MHz vco with tuning sensitivity ranging from 10Hz to 100MHz/V.

Rohde states:

"It must be noted that above a certain sensitivity, in this case 10MHz/V, the phase noise is determined only by the circuit's tuning diodes and is no longer a function of the resonator and diode Q."

This is extremely significant in the case of octave-bandwidth vco's! So one path to a low noise floor might be a very low noise vco operating between 250 and 500 MHz, and a wideband low-N pll to cover 1 to 2 GHz. Just for fun, here is a collection of vfo oscillators:

http://www.pan-tex.net/usr/r/receivers/svfo.htm

Figure 13 shows two methods of dc-stabilization to reduce flicker noise. Figure 14 shows the improvement, about 15dB.

Rohde covers two of the three pins in a transistor in his bias stabilization patent. I wonder which pin Matjaz Vidmar used in his article at

http://www.vhfcomm.co.uk/s53mvvco.htm

Whichever one it is, I like his approach better :)

"Nonlinear Effects In Oscillators and Synthesizers"

http://www.synergymwave.com/publications/PDF/ims2001.pdf

Repeat of bias stabilization circuits.

Figure 23. 100 MHz VCXO for ultra low phase noise applications. The HSMS2800 hot carrier diode provides noise reduction. Figure 24 shows the improvement.

More on spur reduction techniques.

Best Regards,

Mike Monett

1088. Re: Calculating coils for 120mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 22:36:43 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3C605E7B.CCB40D41@sympatico.ca>
Source record: 46630

A previous post gave this information:

Hello John,

About 6 turns on a 1/4 inch (6mm) former will give you 100nH .
This will be resonant at 120MHz if you use a 17.5pF capacitor -
this is well within the range of your 4 to 40pF trimmer.

Unfortunately he left out the length.

Somewhere around 100 nH or 115nH is about right for this capacitance range.
100 nH for 17 pf, 115 nH for 15 pf

The formula for resonance is
f = 10^6 /(2 x pi x sqrt (LC)) where

f is in kHz
L is in microhenrys
C is in pF.

From the ARRL handbook, the formula for inductance of an air core coil
is

L(uH) = d^2 x n^2

18d + 40 l
where
L = inductance in micro henrys, about 0.1 or 0.115 for you
d = coil diameter in inches
l = coil length in inches
n = number of turns.

n = sqrt (L(uH) x (18d +40l))
---
d

If you want a VFO for a signal generator at 120 MHz then you need
to consider the effects o the oscillator.

Rhode designed a 74-105 Mhz VCO with a 92 nH coil using 4-turns
with a tap a 1 and 2 turns from the ground in a Hartley configuration.

>
> >
> Sorry Bill
>
> The Capacitor that I have managed to obtain is from 2 to 26 pf , a variable
> for fm use, and I have also tried using a 40pf trimmer.

>
> Would these change the inductance greatly??
>
> John

1089. Re: Soldering Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 22:54:08 UTC
From: Bob Javits <rjavits@optonline.net>
Message-ID: <koZ78.87958$B94.20451390@news02.optonline.net>
Source record: 46631
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

jim: your problem may not be corrosion, but lack of heat instead.

that wire may be acting like a big heat sink, and if your heat source is not large enough, the heat is traveling up the wire, and the end will never got hot enough to melt the solder and let it attach to the wire.

hope this helps.....

bob wb2aiu

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.314 / Virus Database: 175 - Release Date: 01/11/2002

1090. Re: Soldering Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 23:28:07 UTC
From: "Alexander S. Wood" <alec_wood@nospamplease.ntlworld.com>
Message-ID: <d%Z78.13304$jV2.965080@news2-win.server.ntlworld.com>
Source record: 46633
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Personally, I just dip it into one cell of an old car battery, seems to work ok. I wouldn't recommend licking it afterwards though.....

73

Alec M1BNK

"J Titcomb" <kimoloka@hawaii.rr.com> wrote in message news:4HL78.13177$Ib.2741039@typhoon.hawaii.rr.com...
> Aloha, anyone got any suggestions for soldering weathered stranded wire? I'm
> trying to revive my G5RV which blew down during the last storm here. I've
> tried wire brushing it, sanding it, using flux...none of these work. Is
> there some homebrew secret for cleaning corrosion from copper wire, making
> it like new so it can be soldered? Some acid wash or something? Mahalo, I
> appreciate the help.
>
> Jim KH6IX
>
>

1091. Mobile Radio Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 23:36:00 UTC
From: "Richard F. Gillette P.E." <r.f.gillette@ieee.org>
Message-ID: <3C606B7E.B702A19D@ieee.org>
Source record: 46632
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equiptment

I have seen a recommendation for using a standard connector (between the original connector and battery) so that in an emergency one radio could be substituted for another.

Can anyone point me to a reference?

Thanks,

Richard W9PE

1092. Re: Calculating coils for 120mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-05 23:42:01 UTC
From: la8ak.xnd@online.no
Message-ID: <3c60628c.107531841@news.online.no>
Source record: 46634

On Tue, 5 Feb 2002 09:27:10 -0000, "john.bean1"
<john.bean1@ntlworld.com> wrote:

>
>"Bill Kirkland" <kirklandb@sympatico.ca> wrote in message
>news:3C5F39E2.D496053@sympatico.ca...
>> You still haven't answered the question from a previous post, what
>capacitance,
>> i.e. what is the value of the variable capacitor?
>>
>> If you are trying to use the standard 365 pf variable at 120 MHz you will
>> probably find that the required inductance is way too low to be practical.
>>
>> Check the ARRL Handbook.
>>
>Sorry Bill
>
>The Capacitor that I have managed to obtain is from 2 to 26 pf , a variable
>for fm use, and I have also tried using a 40pf trimmer.
>
>Would these change the inductance greatly??
>
>John
>
>
suppose it is for a pirate transmitter, then I'll cancel my message
--
remove ,xnd to reply

1093. AntiSpam Test

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 00:12:18 UTC
From: Yankee73 <me@zilch.com>
Message-ID: <3C6074E2.89F42131@zilch.com>
Source record: 46635

```
--
73 From AC6V, Rod In Oceanside, CA
I doubt, therefore I might be!

AC6V Mega Ham Index at http://ac6v.com
AC6V Book For DXers at http://ac6v.com/DXSAMPLE.htm
```

1094. Re: WTB: Instruction Sheet For Use With The Cahill-Thomas Sanity Meter, Series JM-14 (Manual)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 01:14:33 UTC
From: noone@nowhere.org
Message-ID: <io016ucuqia2kbbqo5og61hflqt6rlh9p2@4ax.com>
Source record: 46636

On Tue, 5 Feb 2002 19:27:41 -0000, "Richard Daventry"
<newsgps_email@ntlworld.com> wrote:

>I've managed to find a torn portion of the Instruction Sheet and it reads:
>
>"
>..in relation to the present statistical norm.
>
>3. EXPLANATION OF NUMBERS ZERO TO THREE
>
>On this model, as on all Sanity Meters, Zero is the theoreticaly perfect
----------snip!----------

Did you or Mr. Fritz Leiber have another of these sanity meters? I
sure could use one on daze like today!

1095. Re: AntiSpam Test

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 01:58:41 UTC
From: la8ak.xnd@online.no
Message-ID: <3c608d64.118501917@news.online.no>
Source record: 46637

On Tue, 05 Feb 2002 16:12:18 -0800, Yankee73 <me@zilch.com> wrote:

>
>
>--
>73 From AC6V, Rod In Oceanside, CA
>I doubt, therefore I might be!
>
>AC6V Mega Ham Index at http://ac6v.com
>AC6V Book For DXers at http://ac6v.com/DXSAMPLE.htm
>
>
your spam rec'd

--
remove ,xnd to reply

1096. Re: Soldering Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 02:20:13 UTC
From: LRod-removethispart-@pobox.com
Message-ID: <3c60910f.338601835@netnews.worldnet.att.net>
Source record: 46638
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Tue, 05 Feb 2002 08:57:55 GMT, mike@corn2.freeserve.co.uk (Mike W)
wrote:

> Plumbers flux is acidic, some more than others (IIRC eutectic is the
> nastiest one) but all are neutralised by water.

Uh, eutectic is not a flux. Eutectic is the particular percentage of
an alloy (tin/lead solder in this case) which has the lowest melting
point and which (at least in the case of 63/37 Pb/Sn solder), when
cooling, transforms from liquid directly to solid without an
intervening crystalline state.

LRod

1097. Re: AntiSpam Test

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 02:22:49 UTC
From: Yankee73 <me@zilch.com>
Message-ID: <3C609379.DEC66679@zilch.com>
Source record: 46639

NO NO NO --- It was AntiSpam Test. Want to see how many spam to my alias and how I can filter things out.

Am receiving 150 E-Mails a day --- mostly spam, junk, threats and nonnsense. The usegroups used to be a valuable means of information,, now all this extraneous stuff has really ruined it and I can't give my true E-Mail address any more, sad state of affairs, but true.

J M Noeding wrote:

> On Tue, 05 Feb 2002 16:12:18 -0800, Yankee73 <me@zilch.com> wrote:
>
> >
> >
> >
> your spam rec'd
>

1098. Re: Mobile Radio Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 02:36:13 UTC
From: John Smith <johnsmith@microsoft.com>
Message-ID: <a3q4qv$c3n$1@cnn.cns.ksu.edu>
Source record: 46640
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equiptment

Chek out http://www.qsl.net/ab0mv/molex.htm, which is apparently the older
of the two "standards" and good for up to 8 amps, and
http://www.emaares.com/ppole.htm for reference to both the 'older' and
'newer' standards.

Personally, I'm going with Anderson Power Pole connectors, and carrying some
APP-->Molex adapters just in case.

JD

Richard F. Gillette P.E. wrote in message <3C606B7E.B702A19D@ieee.org>...
>I have seen a recommendation for using a standard connector (between the
>original connector and battery) so that in an emergency one radio could
>be substituted for another.
>
>Can anyone point me to a reference?
>
>Thanks,
>
>Richard W9PE
>

1099. Re: Mobile Radio Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 02:37:42 UTC
From: r9c9nixon@mi9nd9spring.com
Message-ID: <3c609570.6323921@news.mindspring.com>
Source record: 46641
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equiptment

"Richard F. Gillette P.E." <r.f.gillette@ieee.org> wrote:

>I have seen a recommendation for using a standard connector (between the
>original connector and battery) so that in an emergency one radio could
>be substituted for another.
>
>Can anyone point me to a reference?
>
>Thanks,
>
>Richard W9PE
>
Our ARES group (Orange County, NC) has settled on a connector
available from RS. It is polarized and the female socket has the male
pins. I believe that they are the 20 amp connectors. I saw an
interesting variation in QST lately for a standard for keys/keyers
that used the similar but three conductor connector. I have the rig
in the car set up with it for easy in/easy out. I also have a set of
adaptors for my Drake PS-7 to use with other rigs using the
connectors.

Russ

Russ
"Two-fifteen, no ambulance needed!"
Subtract all nines to reply

1100. Re: Soldering Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 04:01:55 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <0c816uoo1tfja8oo51mde4ac90rqp9cjb1@4ax.com>
Source record: 46642
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

"J Titcomb" <kimoloka@hawaii.rr.com> wrote:

>Aloha, anyone got any suggestions for soldering weathered stranded wire? I'm
>trying to revive my G5RV which blew down during the last storm here. I've
>tried wire brushing it, sanding it, using flux...none of these work. Is
>there some homebrew secret for cleaning corrosion from copper wire, making
>it like new so it can be soldered? Some acid wash or something? Mahalo, I
>appreciate the help.

Dipping in Muriatic acid works well. Just swish it around in clean
water afterwards to remove the acid left behind in the strands.
Muriatic/hydrocloric acid leaves no residue, even the HCL will
evaporate in a few minutes, but for the sake of your tools, etc., it
is best to remove it well before proceeding.

It is quite possible that the comment about insufficient heat is also
important here. It can be surprising how well a large wire can conduct
heat away.

-

Jim Adney jadney@vwtype3.org
Madison,Wisconsin USA

1101. Re: Glue Metal to Plastic ?/

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 04:01:56 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <lj816ugdcuvjujbar7qo6ib6k0c95va8ku@4ax.com>
Source record: 46643

Cathexis@yourhaterols.com (Reticulum) wrote:

>I want to fix a metal pedastal to a wooden base and screws/bolts
>are not an option. Is there a fixative/glue that will do the job? It's
>for the coil mount for a one-off crystal set and does not need to be
>" industrial strength."

One of the best and simplest solutions to things like this is good quality foam core double stick tape. Because it is flexible, you don't have the problem of things with different coefficients of expansion breaking apart as the temperature changes. It also tolerates parts that aren't perfectly flat. I haven't found anything yet that it won't stick to, as long as it's smooth and clean. (It doesn't stick too well to cinder block.) This stuff is easy to use, and you can put the rest of the roll back in the drawer and keep it for the next job. Just cut it with scissors to make a patch that will sit on the bottom of your coil mount and stay out of sight.

The 3M stuff is exceptionally strong.

-

Jim Adney jadney@vwtype3.org
Madison,Wisconsin USA

1102. Re: Glue Metal to Plastic ?/

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 04:23:34 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c60afaf.384423804@news.erols.com>
Source record: 46644

On Tue, 5 Feb 2002 14:15:49 -0600, "Glenn Pederson" <gpeder@elnet.com> wrote:

>This might help:
>
>http://www.thistothat.com/cgi-bin/glue.cgi?lang=en&this=Metal&that=Wood

Great site. I'm sure to remember it. Thx.

>
>"Reticulum" <Cathexis@yourhaterols.com> wrote in message
>news:3c60355c.353103544@news.erols.com...
>> I want to fix a metal pedastal to a wooden base and screws/bolts
>> are not an option. Is there a fixative/glue that will do the job? It's
>> for the coil mount for a one-off crystal set and does not need to be
>> " industrial strength."
>>
>> TIA,
>>
>> Andrew
>> Reticulum
>>
>> Remove "your.hat" when replying via e-mail
>
>

Reticulum

Remove "your.hat" when replying via e-mail

1103. Re: Glue Metal to Plastic ?/

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 04:26:32 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c60afcd.384453994@news.erols.com>
Source record: 46645

On Tue, 05 Feb 2002 22:11:18 GMT, "G. Skiffington" <skiffing@nbnet.nb.ca> wrote:

>Any number of the common epoxy glues available through your local
>building supplies/hardware/auto jobber will do the job just fine.
>Typically (with nearly anything) ensure the surfaces are oil/grease free
>and free of anything loose which may scale off (you'd be gluing to this
>scale otherwise).....Room temperature or a little warm is best for a
>good cure.....mechanically support the items being glued if you can (or
>put the structure in a secure place while it's "balancing").
>
>Have fun....Keep on tinkering.....THAT...is Real Ham Radio
>
>73 - Gord VE1AJF

Thx. for more practical advise.

By the way, if you're ever active on 80M, I do a little paper chasing
on the 3905CC Net and a lot of people would kill for NB, CA. Let
me know if you'd like to be popular.

73 de KG4JBM/ Andrew

Reticulum

Remove "your.hat" when replying via e-mail

1104. Re: Soldering Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 05:01:45 UTC
From: mcalhoun@ksu.edu
Message-ID: <a3qdbp$jae@unix1.cc.ksu.edu>
Source record: 46646
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

>>Aloha, anyone got any suggestions for soldering weathered stranded wire? I'm
>....[snip]....

>Dipping in Muriatic acid works well. Just swish it around in clean
>....[snip]....

You might try silver polish; I've even been able to
solder aluminum through a "puddle" of polish.

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

1105. RS TRC-509 (49.830MHz FM) to 6m conversion?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 07:40:54 UTC
From: "Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net>
Message-ID: <C8066FEFC53F2319.370B3A277AD7ECC7.8959D980348A883C@lp.airnews.net>
Source record: 46547

Looking for any good info on converting the Radio Shack TRC-509
49.830MHz single-channel HT to 6m. My local Rat Shack was getting rid
of the last of its stock for $5/each, so it seemed like a nice way to
get a fair bit of a small 6m FM rig prebuilt for dirt cheap :)

It appears to use a 3rd overtone 16.45833MHz crystal for RX, (455kHz
IF) and a 3rd overtone 16.610MHz crystal for TX. Has anyone already
done this, and run into any snags with just swapping the crystals and
putting a BNC in place of the stock antenna?

I'm thinking about possibly adding a small (1W or so) amp and putting
the whole thing in a bigger case. Any recommendations for amp plans
to go from its stock (50-100mW?) output to 1W?

Joe Bramblett, KD5NRH
kd5nrh@kd5nrh.net

1106. Re: WTB: Instruction Sheet For Use With The Cahill-Thomas Sanity Meter, Series JM-14 (Manual)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 07:48:17 UTC
From: Richard Daventry <newsgps_email@ntlworld.com>
Message-ID: <Pb588.118$jL6.73251@news6-win.server.ntlworld.com>
Source record: 46548

<noone@nowhere.org> wrote in message
news:io016ucuqia2kbbqo5og61hflqt6rlh9p2@4ax.com...
> ----------snip!----------
> Did you or Mr. Fritz Leiber have another of these sanity meters? I
> sure could use one on daze like today!

The text I could not read at first, reads: "for our civilization".
Obviously, you would have to match with whatever civilization this meter was made for otherwise you would get erronious readings. It works of 110v, so maybe it means US civilization. Maybe the manufacturer made export models for each country. I've only got one Meter. Must be pretty rare these Meters.

1107. Re: SSB Exciter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 08:25:17 UTC
From: remnan@hotmail.com
Message-ID: <9832a498.0202060025.1a17f15f@posting.google.com>
Source record: 46549

Thank you all for the valuble messages posted in response to my query. When I was in college, I built a SSB transmitter operationg on the 7MHz band, using the 9MHz filter method of SSB generation. Since then it was my long cherished dream to build a SSB transmitter operating multi-band. From the various messages posted, I learn one thing....I am far away from current technology. I have not been active on the air for almost 10 years now as I work in U.A.E where foreigners don't get reciporocal licences! Anyhow I don't give up my hopes. Should anyonwe have more info or advices, please let me know.

Finally, just a clarifictaion. Yes, I am an Indian, and getting electronic components in VU2 used to be very hard. Honestly I don't know what's the situation like right now,but presume its still tough!

Cheers
R.Narayanan
VU2YAP

marsgal42@hotmail.com (Laura Halliday) wrote in message news:<d42b5a72.0202040901.17f9ecc@posting.google.com>...
> mike@corn2.freeserve.co.uk (Mike W) wrote in message news:<3c5df935.15900102@news.freeserve.net>...
>
> > On 3 Feb 2002 16:06:26 -0800, marsgal42@hotmail.com (Laura Halliday)
>
> > wrote:
>
> >
> > >analogue phasing rigs, DSP phasing
>
> > >rigs, polyphase rigs, Weaver rigs, and so on.
>
> > >
>
> > none of the above are 9 mhz Filter type designs, which was what was
>
> > asked for, and therefore do not count in this instance. Even though
>
> > they are useful methods of generating SSB.
>
>
>
> That is not at all clear - my reading was that the
> original poster was looking to build an SSB exciter
> and had found one that looked promising. That he

> wanted to build the exact design from Solid State
> Design is not at all clear, and in 2002 there
> are better (certainly more reproducable) ways of
> doing it.
>
> Laura Halliday VE7LDHï¿½ï¿½ï¿½ï¿½ "Que les nuages soient notre
> Grid: CN89lgï¿½ pied a terre..."
> ICBM: 49 16.57 N 123 0.24 Wï¿½ï¿½ï¿½ï¿½ï¿½ï¿½ï¿½ï¿½ - Hospital/Shafte

1108. Re: Mobile Radio Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 10:46:05 UTC
From: john graesser <graesser@tca.net>
Message-ID: <u622c92ti65n5a@corp.supernews.com>
Source record: 46550
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equiptment

Our local ham club had a handout on this once when doing a program on
emergency communications. I thought it was such a good idea that I converted
the power cords of all my 12 volt equipment and power supplies to use them.
Anything I have that uses 12 volts can either plug into my car or to my home
power supply.

I have a cluster of 5 connecters in the car and 6 on my home supply, that
way I can keep my 10 meter rig, 2m ht, and 2m amp connected in the car all
the time, and then have my other 10 meter rig and 2m mobile at the house.
But if I needed to, I could swap radios from one to the other.

I can also power my anntenna analyser with the car power, etc.
thanks, John.
KC5DWD

"Richard F. Gillette P.E." <r.f.gillette@ieee.org> wrote in message
news:3C606B7E.B702A19D@ieee.org...
> I have seen a recommendation for using a standard connector (between the
> original connector and battery) so that in an emergency one radio could
> be substituted for another.
>
> Can anyone point me to a reference?
>
> Thanks,
>
> Richard W9PE
>

1109. Re: Mobile Radio Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 11:52:55 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3C611917.E462DF2B@bloomer.net>
Source record: 46551
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equiptment

I use the 2 pin molex connectors from Radio Shack. They have 2
versions. Be sure to use the larger one that is good to 20 Amps. I
always make the pin at the pointy end positive so it's easy for all in
our club to remember (P oint = P ositive). Also, use the female pins on
the cable side coming from the battery because its pins stay fully
inside the connector so that when the cable and radio are disconnected
and you're driving around on bumpy roads, the pins can't accidentally
contact ground and blow a fuse or burn up the wire.

Scott
N0EDV

"Richard F. Gillette P.E." wrote:
>
> I have seen a recommendation for using a standard connector (between the
> original connector and battery) so that in an emergency one radio could
> be substituted for another.
>
> Can anyone point me to a reference?
>
> Thanks,
>
> Richard W9PE

--
Scott
http://corbenflyer.tripod.com/
Building RV-4
Gotta Fly or Gonna Die!

1110. I fixed a VF-1

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 12:09:20 UTC
From: jwodell@provide.net
Message-ID: <3c611c6a.1262039@news.provide.net>
Source record: 46552

Had an old VF-1 that had started jumping frequency. Never
liked that unit, but there it was.

Replaced almost every part in the darned thing. Turned out
that the Litz wire (you all remember Litz wire) on the big coil
had become unsoldered, even though it looked soldered.

Now I am back on with a steady, well drifty, signal.

I still don't like that unit.

Had to tell someone!

73 jerry w8gnd

1111. Re: I fixed a VF-1

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 14:16:10 UTC
From: jcplpsm@aol.communicate
Message-ID: <20020206091610.04192.00001369@mb-df.aol.com>
Source record: 46553

>I still don't like that unit.
>
>Had to tell someone!
>
>73 jerry w8gnd
>

Jerry,

Don't you just hate it when you end up fixing something that you hoped would be unfixable so you could justify replacing it?

1112. Re: WTB: Instruction Sheet For Use With The Cahill-Thomas Sanity Meter, Series JM-14 (Manual)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 14:52:39 UTC
From: Richard Daventry <newsgps_email@ntlworld.com>
Message-ID: <qpb88.776$jL6.375630@news6-win.server.ntlworld.com>
Source record: 46554

"Mike Andrews" <mikea@mikea.ath.cx> wrote in message
news:tKV78.20936$Or5.3172976782@newssvr16.news.prodigy.com...
> What _is_ this device? It sounds like something to be found at
> the tinfoil-hat store.

Indeed.

1113. Re: AntiSpam Test

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 14:53:08 UTC
From: KB9TMP <NoMoreSpam4Me@antisocial.com>
Message-ID: <a3rftqofd1@dagobah.blueriver.net>
Source record: 46555

"Yankee73" <me@zilch.com> wrote in message news:3C609379.DEC66679@zilch.com...
> NO NO NO --- It was AntiSpam Test. Want to see how many spam to my alias
> and how I can filter things out.
>
> Am receiving 150 E-Mails a day --- mostly spam, junk, threats and
> nonnsense. The usegroups used to be a valuable means of information,,
> now all this extraneous stuff has really ruined it and I can't give my
> true E-Mail address any more, sad state of affairs, but true.
>
> J M Noeding wrote:
>

Just go get you a "disposable" email account and use that as the
"posting address" then set the filters on the new account to reject
"EVERYTHING" as in filter for your new address and send it to
the trash. Then you get no spam at all, or any thing else for that matter.

I get between 15 to 25 spams a day at my yahoo.com address,
most of which go to the trash automatically. That's why I have the
email you see on this post. Plus it looks like it's been made up
to avoid spammers (little do they know it's real). Been working
real good so far.

--

'73' From KB9TMP
NCI-2385
Email to NoMoreSpam4Me@antisocial.com

The secret of life is honesty and fair dealing
..if you can fake that, you've got it made.
-Groucho Marx

1114. Re: AntiSpam Test

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 15:59:52 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c614e02.424961495@news.erols.com>
Source record: 46556

On Tue, 05 Feb 2002 18:22:49 -0800, Yankee73 <me@zilch.com> wrote:

>NO NO NO --- It was AntiSpam Test. Want to see how many spam to my alias
>and how I can filter things out.

How will you know which are coming from your " old" nom de 'net and
which were generated by this one ?? We're all prisoners of our ISP's. If
you have only one then de-spamming is difficult and time-costly. Keeping
2 ISP's won't eliminate spam, but will allow you a littel more control without
quite as much effort (use only one for usenet and block everything). Trying
anything other than fairly obvious address-munging quickly gets to the point
of diminishing returns -- remember, they already got your real address years
ago before you wised up - now they sell the list it's on all over the internet.

Spam is like a wife that won't cook or clean: You can give 'em the hell
they deserve for their laziness, but you're only gonna pay for it down the road.
Either in paytback or (more likely) endless nagging headaches that take up
your time and rob your sense of peace. OTOH, zero effort will only draw more
fire your way (or worse, she might try to " improve" you). To me, the wisest
path seems to be to take a * low * but determined stance from which you
never retreat regardless of appeals to reason or common sense. Yet still,
project a watchful, but tolerant, attitude to her incomprehensible being-ness.
Then claim that spending money on Ham Radio Goodies is the only thing
that keeps your sanity, so she better not complain about it (though she will).
I admit all this is flawed, but it's the best I've come up with so far. (sigh)

>
>Am receiving 150 E-Mails a day --- mostly spam, junk, threats and
>nonnsense. The usegroups used to be a valuable means of information,,
>now all this extraneous stuff has really ruined it and I can't give my
>true E-Mail address any more, sad state of affairs, but true.
>
>J M Noeding wrote:
>
>> On Tue, 05 Feb 2002 16:12:18 -0800, Yankee73 <me@zilch.com> wrote:
>>
>> >
>> >
>> >
>> your spam rec'd
>>
>
>
>

Reticulum

Remove "your.hat" when replying via e-mail

1115. Re: AntiSpam Test

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 16:31:27 UTC
From: jflanders2@home.com
Message-ID: <3c615939.73805308@NEWS>
Source record: 46557

I will be getting a new ISP and address within the next couple of
weeks and have been wondering how to set it up to avoid spam and yet
let people on the usenets contact me. Any recommendations?

Jerry W4UK

On Tue, 05 Feb 2002 18:22:49 -0800, Yankee73 <me@zilch.com> wrote:

>NO NO NO --- It was AntiSpam Test. Want to see how many spam to my alias
>and how I can filter things out.
>
>Am receiving 150 E-Mails a day --- mostly spam, junk, threats and
>nonnsense. The usegroups used to be a valuable means of information,,
>now all this extraneous stuff has really ruined it and I can't give my
>true E-Mail address any more, sad state of affairs, but true.
>
>J M Noeding wrote:
>
>> On Tue, 05 Feb 2002 16:12:18 -0800, Yankee73 <me@zilch.com> wrote:
>>
>> >
>> >
>> >
>> your spam rec'd
>>
>
>
>

1116. FA: Bargain Kay Vari-Sweep RF signal generator/sweeper.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 16:36:06 UTC
From: tongaloa <tongaloa@alltel.net>
Message-ID: <a3rm1mhad1@iac5.navix.net>
Source record: 46558

This sweeper is a heck of a deal.
I would not be selling except for pending relocation and no space
for it at the new digs.

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1699821510

If we're not supposed to eat animals, then why are they made of meat?

1117. Re: Glue Metal to Plastic ?/

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 18:46:31 UTC
From: Steve Robertson <ke4oh@yahoo.com>
Message-ID: <3C617A07.FE72178B@yahoo.com>
Source record: 46559

Hi Andrew,

Hot glue gun. If you don't have one, local hardware or craft store can fix
you up real cheap. If you don't think that's strong enough, 5-minute
expoxy will work great. And it will be industrial strength.

Best regards,

Steve Robertson

Reticulum wrote:

> I want to fix a metal pedastal to a wooden base and screws/bolts
> are not an option. Is there a fixative/glue that will do the job? It's
> for the coil mount for a one-off crystal set and does not need to be
> " industrial strength."
>
> TIA,
>
> Andrew
> Reticulum
>
> Remove "your.hat" when replying via e-mail

1118. Re: RS TRC-509 (49.830MHz FM) to 6m conversion?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 19:36:49 UTC
From: Screaming Skull <KG4IVT@hot.mail.spicedmeat.sucks.leave.me.alone.com>
Message-ID: <lBf88.94431$a07.24323600@typhoon.southeast.rr.com>
Source record: 46560

I can't answer your question but I would love to hear if you get this project working. I have thought about snagging one of those little HTs but keep forgetting to each time I step into radio shack. There was another ham that converted one of the cheaper 49Mhz kiddie talkies over to 6m by just dropping in another crystal which you couldn't really do here. Since FRS has taken over, these little 49Mhz walkie talkies should be coming down even lower in price. Hmm.

"Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net> wrote in message news:C8066FEFC53F2319.370B3A277AD7ECC7.8959D980348A883C@lp.airnews.net...
> Looking for any good info on converting the Radio Shack TRC-509
> 49.830MHz single-channel HT to 6m. My local Rat Shack was getting rid
> of the last of its stock for $5/each, so it seemed like a nice way to
> get a fair bit of a small 6m FM rig prebuilt for dirt cheap :)
>
> It appears to use a 3rd overtone 16.45833MHz crystal for RX, (455kHz
> IF) and a 3rd overtone 16.610MHz crystal for TX. Has anyone already
> done this, and run into any snags with just swapping the crystals and
> putting a BNC in place of the stock antenna?
>
> I'm thinking about possibly adding a small (1W or so) amp and putting
> the whole thing in a bigger case. Any recommendations for amp plans
> to go from its stock (50-100mW?) output to 1W?
>
>
>
> Joe Bramblett, KD5NRH
> kd5nrh@kd5nrh.net

1119. Re: Mobile Radio Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 20:22:07 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3C61906F.BC2923EC@oda.com.au>
Source record: 46561
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equiptment

Scott wrote:
>
> I use the 2 pin molex connectors from Radio Shack. They have 2
> versions. Be sure to use the larger one that is good to 20 Amps. I

Haven't seen the connnector that you are talking about... can you give us some more info:

Do you know the Molex part number (for the plug / receptacle / pins)?

Do you have a choice of which plastic shell receives the male and female pins? If so, which way do you wire them. (I know there are hints below... but it is not absolutely clear.)

> always make the pin at the pointy end positive so it's easy for all in
> our club to remember (P oint = P ositive). Also, use the female pins on
> the cable side coming from the battery because its pins stay fully
> inside the connector so that when the cable and radio are disconnected
> and you're driving around on bumpy roads, the pins can't accidentally
> contact ground and blow a fuse or burn up the wire.
>
> Scott
> N0EDV
>
> "Richard F. Gillette P.E." wrote:
> >
> > I have seen a recommendation for using a standard connector (between the
> > original connector and battery) so that in an emergency one radio could
> > be substituted for another.
> >
> > Can anyone point me to a reference?
> >
> > Thanks,
> >
> > Richard W9PE
>
> --
> Scott
> http://corbenflyer.tripod.com/
> Building RV-4
> Gotta Fly or Gonna Die!

1120. Re: Glue Metal to Plastic ?/

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 21:57:08 UTC
From: Sylvan Butler <Znospam+noZs_0202@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrna639ln.qpc.Znospam+noZs_0202@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 46562

On Tue, 05 Feb 2002 19:44:41 GMT, Reticulum <Cathexis@yourhaterols.com> wrote:
> I want to fix a metal pedastal to a wooden base and screws/bolts
> are not an option. Is there a fixative/glue that will do the job? It's

Yes.

> for the coil mount for a one-off crystal set and does not need to be
> " industrial strength."

Foam tape (as someone else suggested) is probably easiest and fairly
removable if need be.

I like urethane glue. Glues just about anything to anything. No
mixing with accompanying problems if the ratio is a bit off.
Waterproof after cured, but moisture cure, so if gluing non-porous
objects (like metal to glass) a spritz of water is used. Expands
slightly as it cures to fill gaps or force into porous materials
(like concrete block), so hold tight while curing (a few hours).
Sandable and takes stain.

Only disadvantages, cleanup off skin can be nasty, uncured it is
generally irritating to skin, and the vapors are nasty.

Elmer's has a variety I've used, purchased from Home Depot.

Gorillaglue.com is another brand. (I've seen but not tried)

And re. thistothat.com, they recognized gorilla glue as the "glue of
the month" in Feb 2000, and a different one on
http://www.thistothat.com/gom/2000.07.shtml which also sums up
advantages and disadvantages and has some good links.

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. ##### change ^ to @ ##### |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Fight terrorism, arm the population!

1121. Re: Mobile Radio Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 22:03:55 UTC
From: Sylvan Butler <Znospam+noZs_0202@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrna63a2e.qpc.Znospam+noZs_0202@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 46563
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equiptment

On Tue, 5 Feb 2002 20:36:13 -0600, John Smith <johnsmith@microsoft.com> wrote:
> http://www.emaares.com/ppole.htm for reference to both the 'older' and
> 'newer' standards.
>
> Personally, I'm going with Anderson Power Pole connectors, and carrying some
> APP-->Molex adapters just in case.

I second the power pole's. If you appreciate elegant engineering
that "just works" easily and smoothly, you'll like the power pole.

One shell available in many different colors, genderless (you create
your own 'gender' by assembling multiple shells into a multi-pole
connector), and interchangable contacts in 15, 30, and 45amp (for
different wire sizes) means you can afford to stock connectors and
to make all the cabling and adaptors you need.

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. ##### change ^ to @ ##### |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Fight terrorism, arm the population!

1122. Re: AntiSpam Test

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 23:04:11 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C61B66B.B201D406@eznec.com>
Source record: 46564

Try SpamCop's forwarding service, http://spamcop.net for details.

Roy Lewallen, W7EL

Jerry Flanders wrote:
>
> I will be getting a new ISP and address within the next couple of
> weeks and have been wondering how to set it up to avoid spam and yet
> let people on the usenets contact me. Any recommendations?
>
> Jerry W4UK

1123. MRF138 - What are They Worth?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-06 23:19:51 UTC
From: melissaNo0oOSPAM@dimensional.com
Message-ID: <3c61ba17_2@omega.dimensional.com>
Source record: 46569
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.misc,sci.electronics.design

I came across a static bag of these, new, in my basement. (14 or 15 of them from a quick rough count)

Does anyone know what they may be worth?

--
Melissa
KW0WW

1124. Re: WTB: Instruction Sheet For Use With The Cahill-Thomas Sanity Meter, Series JM-14 (Manual)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 00:20:35 UTC
From: noone@nowhere.org
Message-ID: <mqh36u8ktjam9ovn39v8thl4ufk1ojrknm@4ax.com>
Source record: 46565

On Wed, 6 Feb 2002 14:52:39 -0000, "Richard Daventry"
<newsgps_email@ntlworld.com> wrote:

>
>"Mike Andrews" <mikea@mikea.ath.cx> wrote in message
>news:tKV78.20936$Or5.3172976782@newssvr16.news.prodigy.com...
>> What _is_ this device? It sounds like something to be found at
>> the tinfoil-hat store.
>
>Indeed.
I've found that the metallized bags such as are used to protect our
expansion cards, hard drives, & etc from ESD are quite capable of
attenuating the alien rays. The larger ones fit nicely over the head,
and are semi-transparent so that one can pull the bag completely down
over one's face in event of a deluge attack.
Say, why don't you open the case on that Sanity Meter? Maybe some
pictures of the circuit board could help recreate it. I think that a
good, working Sanity Meter just might be the answer for detecting when
the alien rays are present. I really hate to wear my ESD bag all the
time.

1125. Re: RS TRC-509 (49.830MHz FM) to 6m conversion?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 00:24:09 UTC
From: "Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net>
Message-ID: <582A1AA769D27552.9EAA33AC52E9FDA2.1AC4E695D7AF472A@lp.airnews.net>
Source record: 46566

On Wed, 06 Feb 2002 19:36:49 GMT, "Screaming Skull"
<KG4IVT@hot.mail.spicedmeat.sucks.leave.me.alone.com> wrote:

>I can't answer your question but I would love to hear if you get this
>project working. I have thought about snagging one of those little HTs but
>keep forgetting to each time I step into radio shack. There was another ham
>that converted one of the cheaper 49Mhz kiddie talkies over to 6m by just
>dropping in another crystal which you couldn't really do here. Since FRS
>has taken over, these little 49Mhz walkie talkies should be coming down even
>lower in price. Hmm.

Well, in theory, it should just be a matter of swapping the two
crystals for the right values. Getting crystals of those values, OTOH
appears to be a bit harder, depending on which frequency or pair you
want.

I'm fairly confident that if I can track down the crystals I need,
I'll be able to get it onto 6m, I was mostly hoping that someone here
would know how to squeeze a bit more power/efficiency out of it once
that's done.

Joe Bramblett, KD5NRH
kd5nrh@kd5nrh.net
http://www.kd5nrh.net

1126. Re: I fixed a VF-1

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 00:38:04 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <u63j3ht5nffd00@corp.supernews.com>
Source record: 46567

If you think Litz wire is hard to solder just think about how hard it would
be to make...
And they had no trouble making it in the 30s and perhaps the 20s..
I've had my share of problems with Litz, and I've often wondered if using it
to solve the skin effect phenomenom is measurable?
Anyone know?
"Jerry W. O'Dell" <jwodell@provide.net> wrote in message
news:3c611c6a.1262039@news.provide.net...
> Had an old VF-1 that had started jumping frequency. Never
> liked that unit, but there it was.
>
> Replaced almost every part in the darned thing. Turned out
> that the Litz wire (you all remember Litz wire) on the big coil
> had become unsoldered, even though it looked soldered.
>
> Now I am back on with a steady, well drifty, signal.
>
> I still don't like that unit.
>
> Had to tell someone!
>
> 73 jerry w8gnd
>

1127. Re: I fixed a VF-1

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 00:58:29 UTC
From: " .Your Friend Bill" <none@coqui.net>
Message-ID: <3C61D135.771FC7FA@coqui.net>
Source record: 46568

Henry Kolesnik wrote:
>
> If you think Litz wire is hard to solder just think about how hard it would
> be to make...
> And they had no trouble making it in the 30s and perhaps the 20s..
> I've had my share of problems with Litz, and I've often wondered if using it
> to solve the skin effect phenomenom is measurable?
> Anyone know?

I've had some coils where a couple of the strands had broken at the
joint and it seems to make a difference. Not earth-shaking, but a
difference nonetheless.

-Bill

1128. Re: Soldering Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 03:07:24 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <2kq36ugm7hu2h6ruiho1oa23guda4lcvch@4ax.com>
Source record: 46570
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

LRod-removethispart-@pobox.com (LRod) wrote:

>On Tue, 05 Feb 2002 08:57:55 GMT, mike@corn2.freeserve.co.uk (Mike W)
>wrote:

>> Plumbers flux is acidic, some more than others (IIRC eutectic is the
>> nastiest one) but all are neutralised by water.
>
>Uh, eutectic is not a flux. Eutectic is the particular percentage of
>an alloy (tin/lead solder in this case) which has the lowest melting
>point and which (at least in the case of 63/37 Pb/Sn solder), when
>cooling, transforms from liquid directly to solid without an
>intervening crystalline state.

You're exactly right, but there is also a company named Eutectic which
makes soldering and brazing alloys. This may be what he was referring
to.

-

Jim Adney jadney@vwtype3.org
Madison,Wisconsin USA

1129. Re: I fixed a VF-1

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 03:24:05 UTC
From: "news.bellatlantic.net" <vze3kq35@verizon.net>
Message-ID: <prm88.24218$0V6.15468@nwrddc02.gnilink.net>
Source record: 46571

We had a VF-1 and a DX40 and SSB adapter, plus an SX101 in the ham radio station in my high school.

"Jerry W. O'Dell" <jwodell@provide.net> wrote in message news:3c611c6a.1262039@news.provide.net...
> Had an old VF-1 that had started jumping frequency. Never
> liked that unit, but there it was.
>
> Replaced almost every part in the darned thing. Turned out
> that the Litz wire (you all remember Litz wire) on the big coil
> had become unsoldered, even though it looked soldered.
>
> Now I am back on with a steady, well drifty, signal.
>
> I still don't like that unit.
>
> Had to tell someone!
>
> 73 jerry w8gnd
>

1130. Re: MRF138 - What are They Worth?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 03:28:10 UTC
From: Cone Killer <NOSPAM@hotmail.com>
Message-ID: <evm88.1961$n27.218816@news1.east.cox.net>
Source record: 46572
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.misc,sci.electronics.design

These guys might know.

http://www.rfparts.com/mototran.html

Regards, Doug aka Cone Killer

"Melissa Liberty - Colorado" <melissaNo0oOSPAM@dimensional.com> wrote in message
news:3c61ba17_2@omega.dimensional.com...
> I came across a static bag of these, new, in my basement. (14 or 15 of them
> from a quick rough count)
>
> Does anyone know what they may be worth?
>
> --
> Melissa
> KW0WW
>
>
>
>

1131. Re: MRF138 - What are They Worth?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 04:41:02 UTC
From: rfwilson@intergate.nospam.bc.ca
Message-ID: <u641auiurp15de@corp.supernews.com>
Source record: 46573
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.misc,sci.electronics.design

In article <3c61ba17_2@omega.dimensional.com>,
melissaNo0oOSPAM@dimensional.com says...
>
>I came across a static bag of these, new, in my basement. (14 or 15 of
them
>from a quick rough count)
>
>Does anyone know what they may be worth?

Almost nothing. They are relatively ordinary RF transistors and worth only a
few bucks each at most.

Bob.

1132. Re: MRF138 - What are They Worth?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 05:10:20 UTC
From: melissaNo0oOSPAM@dimensional.com
Message-ID: <3c620c3c$1_1@omega.dimensional.com>
Source record: 46575
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.misc,sci.electronics.design

"Cone Killer" <NOSPAM@hotmail.com> bestowed such eternal wisdom upon us by
saying from <evm88.1961$n27.218816@news1.east.cox.net>:

>These guys might know.
>
>http://www.rfparts.com/mototran.html

Thanks, I found that page during a search too, but Motorola doesn't list many
MRF part numbers anymore, so they may have discontinued the whole line, and
I'm not sure what the actual demand might be for these, whether anyone even
uses them anymore.

--
- Melissa

1133. Re: MRF138 - What are They Worth?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 05:11:03 UTC
From: melissaNo0oOSPAM@dimensional.com
Message-ID: <3c620c67_1@omega.dimensional.com>
Source record: 46576
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.misc,sci.electronics.design

rfwilson@intergate.nospam.bc.ca (Bob Wilson) bestowed such eternal wisdom
upon us by saying from <u641auiurp15de@corp.supernews.com>:

>In article <3c61ba17_2@omega.dimensional.com>,
>melissaNo0oOSPAM@dimensional.com says...
>>
>>I came across a static bag of these, new, in my basement. (14 or 15 of
>them
>>from a quick rough count)
>>
>>Does anyone know what they may be worth?
>
>
>Almost nothing. They are relatively ordinary RF transistors and worth only
>a few bucks each at most.

Then why does http://www.rfparts.com/mototran.html say $75 ?

--
- Melissa Liberty
Somewhere in Colorado

"...I am opposed to all attempts to license or restrict the arming of
individuals...I consider such laws a violation of civil liberty,
subversive of democratic political institutions, and self-defeating
in their purpose." - Robert Heinlein, in a 1949 letter concerning "Red
Planet"

1134. Re: Smallest QRP Rig?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 05:29:25 UTC
From: "Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net>
Message-ID: <D2400E7D98577414.5BBA4E0D76493050.7A7A8C4BD6F0CE22@lp.airnews.net>
Source record: 46574

On Tue, 05 Feb 2002 14:02:48 +0800, Olaf <olaf@mail.powermax-lcd.com>
wrote:

>I sent a mail to N4HAY and await the response. Would be really bad if
>one would have to use a certain browser (and version) only to see a
>schematic...

I doubt it. More detailed checking appears to show that the pictures
aren't where the references are pointing. Most likely someone
rearranged the directory structure on the site, and forgot to update
the pages.

Joe Bramblett, KD5NRH
kd5nrh@kd5nrh.net
http://www.kd5nrh.net

1135. Re: Soldering Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 06:08:35 UTC
From: JB <ac6tk@nospamcybertime.net>
Message-ID: <a44ofs$2rpr$1@madmax.keyway.net>
Source record: 46477
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Forget about using a torch. It will burn off your flux leaving a mess. Use an large iron. Scrape or use fine 300-400 grit to clean to bright copper. You may have trouble with some steel if you go too deep into Copperweld though.

Jim, ac6tk

"J Titcomb" <kimoloka@hawaii.rr.com> wrote in message news:4HL78.13177$Ib.2741039@typhoon.hawaii.rr.com...
: Aloha, anyone got any suggestions for soldering weathered stranded wire? I'm
: trying to revive my G5RV which blew down during the last storm here. I've
: tried wire brushing it, sanding it, using flux...none of these work. Is
: there some homebrew secret for cleaning corrosion from copper wire, making
: it like new so it can be soldered? Some acid wash or something? Mahalo, I
: appreciate the help.
:
: Jim KH6IX
:
:

1136. Re: AntiSpam Test

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 07:24:34 UTC
From: w9wi@linux1.localdomain
Message-ID: <slrna64be5.bie.w9wi@linux1.localdomain>
Source record: 46579

On Wed, 06 Feb 2002 16:31:27 GMT, Jerry Flanders <jflanders2@home.com> wrote:
>I will be getting a new ISP and address within the next couple of
>weeks and have been wondering how to set it up to avoid spam and yet
>let people on the usenets contact me. Any recommendations?

There's no particularly good answer to this.

NEVER, NEVER, NEVER put your email address in a public place. Configure
your newsreader with a non-existant address - I use "me". If your
newsreader forces you to use a syntatically-correct address I'd use
something at 81832.com. (a Chinese ISP that harbors spammers and deserves
every piece of spam they'll get if you do that...)

DO NOT put your email address on your webpage. At least not in text form.
There was a hint in QST a few months ago about putting it up with
JavaScript. It's a bit easier to use Windows Paint to draw a *picture* with
the text of your email address & put that picture up.

NEVER reply to spam or use the "remove" address. If you're reasonably
confident you know what ISP the spam was sent from, or that any websites
mentioned in the spam are hosted by legitimate companies, it's worthwhile to
send copies of the spam (with all headers) to "abuse" @ those ISPs.

Don't join any mailing lists that post archives to the Web, unless those
lists also hide all email addresses in postings.

You probably can't prevent it altogether.

People you thought were friends will put a "send email to my friend Jerry"
link on their websites with your email address on it. You'll join a mailing
list with no archives - and a spammer will join the list just long enough to
steal the addresses of the regular posters.
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

1137. WTB:QUANTUM LOOP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 07:28:07 UTC
From: Daniel Simpson <dzan@qwest.net>
Message-ID: <07022000201280790l6%dzan@qwest.net>
Source record: 46578
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

WTB:QUANTUM LOOP

please email me at:

dzan@qwest.net

1138. Re: AntiSpam Test

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 08:13:54 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C623742.3A4E9C04@clifto.com>
Source record: 46580

Jerry Flanders wrote:
> I will be getting a new ISP and address within the next couple of
> weeks and have been wondering how to set it up to avoid spam and yet
> let people on the usenets contact me. Any recommendations?

Spammers who spider the newsgroups for addresses seldom download the article bodies, instead taking just the headers. If your address does not appear anywhere in the headers, fewer spammers get hold of it. This has been experimentally verified by several people. So it's *fairly* safe to put your address in your .signature.

There are also tricks some people use. I'd give credit to these clever folk if they were easy to find; instead, I'll just give plagiarized examples:

From: address - fredpants@example.com
.signature quote - Drop pants before replying

From: address - joDELETETHISe@example.com
.signature quote - Do the obvious thing to my address to send me e-mail

Spammers DO have spidering programs that remove "SPAM" and "NOSPAM" from addresses; don't do the obvious, be creative. Also, this aggravates some people who don't like address munging.

--
Britney Spears' Guide to Semiconductor Physics
<http://britneyspears.ac/lasers.htm>

1139. Re: I fixed a VF-1

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 08:14:45 UTC
From: n2cqr@clix.pt
Message-ID: <3c623686.1974282@news.clix.pt>
Source record: 46577

On Wed, 06 Feb 2002 12:09:20 GMT, jwodell@provide.net (Jerry W. O'Dell) wrote:

>Had an old VF-1 that had started jumping frequency. Never
>liked that unit, but there it was.
>
>Replaced almost every part in the darned thing. Turned out
>that the Litz wire (you all remember Litz wire) on the big coil
>had become unsoldered, even though it looked soldered.
>
>Now I am back on with a steady, well drifty, signal.
>
>I still don't like that unit.
>

>Had to tell someone!

Jerry: I came to like mine. I had to completely rebuild it. I told people that mine had been built by a psychotic, soldering school dropout. I tore it down completely and started over using just the schematic. I ended up using more terminal strips than Heath did, and I think my version was more stable than the original.
Cool green dial. Sme VFO as they have in the DX-100.

73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 15.7 W
http://planeta.clix.pt/n2cqr

1140. Re: Mobile Radio Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 08:15:32 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C6237A4.6B0C039E@clifto.com>
Source record: 46581
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equiptment

Scott wrote:
> I use the 2 pin molex connectors from Radio Shack. They have 2
> versions. Be sure to use the larger one that is good to 20 Amps.

I thought the ARRL standardized on the 8-amp connectors (RS 274-222), and
that those wouldn't mate with the 20-amp jobs...?

I still have the issue of 220 Notes that gave the details.

--
Britney Spears' Guide to Semiconductor Physics
<http://britneyspears.ac/lasers.htm>

1141. Re: WTB: Instruction Sheet For Use With The Cahill-Thomas Sanity Meter, Series JM-14 (Manual)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 08:24:51 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C6239D3.106D4160@clifto.com>
Source record: 46582

Richard Daventry wrote:
> Found the sanity meter at a boot sale, but missing instructions.

I used to use an analog ohmmeter as an IQ meter in high school. I'd touch the leads to the other person's temples and get a small reading, then I'd touch them to my temples and get nearly full-scale. Of course I never found it necessary to mention that I was squeezing the probe tips hard when I touched my own temples. Rx10K or Rx100K worked well.

--
Britney Spears' Guide to Semiconductor Physics
<http://britneyspears.ac/lasers.htm>

1142. Re: MRF138 - What are They Worth?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 10:28:42 UTC
From: "Thomas C. Sefranek" <tcs@cmcorp.com>
Message-ID: <3C62566A.38C08A1E@cmcorp.com>
Source record: 46583
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.misc,sci.electronics.design

I looked up my last purchase of them... $27.85 each.
(But that was over 10 years ago...)

Melissa Liberty - Colorado wrote:

> rfwilson@intergate.nospam.bc.ca (Bob Wilson) bestowed such eternal wisdom
> upon us by saying from <u641auiurp15de@corp.supernews.com>:
>
> >In article <3c61ba17_2@omega.dimensional.com>,
> >melissaNo0oOSPAM@dimensional.com says...
> >>
> >>I came across a static bag of these, new, in my basement. (14 or 15 of
> >them
> >>from a quick rough count)
> >>
> >>Does anyone know what they may be worth?
> >>
> >>
> >Almost nothing. They are relatively ordinary RF transistors and worth only
> >a few bucks each at most.
>
> Then why does http://www.rfparts.com/mototran.html say $75 ?
>
> --
> - Melissa Liberty
> Somewhere in Colorado
>
> "...I am opposed to all attempts to license or restrict the arming of
> individuals...I consider such laws a violation of civil liberty,
> subversive of democratic political institutions, and self-defeating
> in their purpose." - Robert Heinlein, in a 1949 letter concerning "Red
> Planet"

--
*
| __O Thomas C. Sefranek tcs@cmcorp.com
|_-\<,_ Amateur Radio Operator: WA1RHP
(*)/ (*) Bicycle mobile on 145.41, 448.625 MHz

http://hamradio.cmcorp.com/inventory/Inventory.html
http://www.harvardrepeater.org

1143. Re: AntiSpam Test

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 14:33:27 UTC
From: KB9TMP <NoMoreSpam4Me@antisocial.com>
Message-ID: <a3u34q$2ra$1@dagobah.blueriver.net>
Source record: 46584

"Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message
news:3C623742.3A4E9C04@clifto.com...
<SNIP>
> Spammers DO have spidering programs that remove "SPAM" and "NOSPAM" from
> addresses; don't do the obvious, be creative. Also, this aggravates some
> people who don't like address munging.
>
> --
> Britney Spears' Guide to Semiconductor Physics
> <http://britneyspears.ac/lasers.htm>

That's great let them remove the SPAM from my email address.
My REAL email address contains the word spam in it and
must be there for it to work.

--

'73' From KB9TMP
NoMoreSpam4Me@antisocial.com
NCI-2385

"I love it when a plan comes together!"
- Col. John "Hannibal" Smith (The A-Team)

1144. Re: Mobile Radio Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 15:50:18 UTC
From: r9c9nixon@mi9nd9spring.com
Message-ID: <3c629cd7.4196095@news.mindspring.com>
Source record: 46592
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equiptment

The RS part number for the 8 amp connectors (a set of male and female) is 274-222. The male pin goes in the female shell and the positive goes to the side with the point, as was posted here earlier. The RS number for the 20 amp connector with the female shell and male pins is 274-151. I don't have the RS number for the mating part and RS Online isn't cooperating in my search. I do need to get a couple of the female connectors, so I'll post again with the number. I think the 20A part is better because it will carry the current needed for most 100W transceivers. I would like to use the Anderson Power Poles, but the RS parts are probably more readily available and have been standardized.

"Clifton T. Sharp Jr." <clifto@clifto.com> wrote:

>Scott wrote:
>> I use the 2 pin molex connectors from Radio Shack. They have 2
>> versions. Be sure to use the larger one that is good to 20 Amps.
>
>I thought the ARRL standardized on the 8-amp connectors (RS 274-222), and
>that those wouldn't mate with the 20-amp jobs...?
>
>I still have the issue of 220 Notes that gave the details.
>
>--
> Britney Spears' Guide to Semiconductor Physics
> <http://britneyspears.ac/lasers.htm>

Russ
"Two-fifteen, no ambulance needed!"
Subtract all nines to reply

1145. Re: I fixed a VF-1

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 15:52:19 UTC
From: donrm@soco.agilent.com
Message-ID: <1013097138.879064@cswreg.cos.agilent.com>
Source record: 46585

Jerry W. O'Dell <jwodell@provide.net> wrote:

> Now I am back on with a steady, well drifty, signal.

I bought one of those VF-1s new in 1954 - think it was
$19. It wasn't necessary to touch the knob to QSY-
just blow in one of the calibration holes in the
top of the case and off it went.

73 Don K6LTS
donrm@soco.agilent.com

1146. Re: AntiSpam Test

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 16:34:18 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <aaau3a.5lt.ln@my.linux.box>
Source record: 46590

In article <a3u34q$2ra$1@dagobah.blueriver.net>, KB9TMP wrote:

> That's great let them remove the SPAM from my email address.
> My REAL email address contains the word spam in it and
> must be there for it to work.

Mine too but I think we are wandering just a tiny bit
off-topic for this NG.

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

1147. Re: MRF138 - What are They Worth?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 16:38:58 UTC
From: melissaNo0oOSPAM@dimensional.com
Message-ID: <3c62ada2$1_2@omega.dimensional.com>
Source record: 46586
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.misc,sci.electronics.design

"Thomas C. Sefranek" <tcs@cmcorp.com> bestowed such eternal wisdom upon us
by saying from <3C62566A.38C08A1E@cmcorp.com>:

>I looked up my last purchase of them... $27.85 each.
>(But that was over 10 years ago...)

Things have changed in 10 years. The only thing I can find on the web, on
them, says $75 now.

--
- Melissa
Somewhere in Colorado

1148. Re: AntiSpam Test

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 17:24:44 UTC
From: mcalhoun@ksu.edu
Message-ID: <a3ud8s$hs6@unix2.cc.ksu.edu>
Source record: 46587

<< Spammers DO have spidering programs that remove "SPAM" and "NOSPAM" from
<< addresses; don't do the obvious, be creative....

<That's great let them remove the SPAM from my email address.
<My REAL email address contains the word spam in it and
<must be there for it to work.

<'73' From KB9TMP, NoMoreSpam4Me@antisocial.com

Now THAT was innovative (or should I say creative?)!

--Myron.

--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

1149. FS: Geo. Stevens Coil Winding Machine

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 17:40:46 UTC
From: rumreichm@tce.com
Message-ID: <aeab8e85.0202070940.1f8bc5c6@posting.google.com>
Source record: 46588

For sale: Geo. Stevens Coil Winding Machine

This benchtop coil winder is suitable for prototyping or small production work. The foot pedal provides precise variable speed control. The winding direction is switch reversible. The turns counter hands show one turn and 25 turns per division respectively, providing fractional turns accuracy even for coils having hundreds of turns.

The winder is 18" wide x 10" deep x 16" high. This winder has provided many years of reliable service and is still going strong! Includes two mandrels, supply spool tensioner and large spool holder. Shipping weight is 75 pounds for the winder and 25 pounds for the accessories. $199 + shipping.

See picture at www.mfr-eng.com/for-sale/winder.gif

1150. Re: Mobile Radio Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 17:53:13 UTC
From: r9c9nixon@mi9nd9spring.com
Message-ID: <3c62bec9.998456@news.mindspring.com>
Source record: 46593
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equiptment

As promised, the mating connector ot the RS 274-151 is the RS 274-154.
I know, I just went out and bought a couple.

Russ

r9c9nixon@mi9nd9spring.com (Russell C. Nixon) wrote:

>The RS part number for the 8 amp connectors (a set of male and female)
>is 274-222. The male pin goes in the female shell and the positive
>goes to the side with the point, as was posted here earlier. The RS
>number for the 20 amp connector with the female shell and male pins is
>274-151. I don't have the RS number for the mating part and RS Online
>isn't cooperating in my search. I do need to get a couple of the
>female connectors, so I'll post again with the number. I think the
>20A part is better because it will carry the current needed for most
>100W transceivers. I would like to use the Anderson Power Poles, but
>the RS parts are probably more readily available and have been
>standardized.
>
>"Clifton T. Sharp Jr." <clifto@clifto.com> wrote:
>
>>Scott wrote:
>>> I use the 2 pin molex connectors from Radio Shack. They have 2
>>> versions. Be sure to use the larger one that is good to 20 Amps.
>>
>>I thought the ARRL standardized on the 8-amp connectors (RS 274-222), and
>>that those wouldn't mate with the 20-amp jobs...?
>>
>>I still have the issue of 220 Notes that gave the details.
>>
>>--
>> Britney Spears' Guide to Semiconductor Physics
>> <http://britneyspears.ac/lasers.htm>
>
>Russ
>"Two-fifteen, no ambulance needed!"
>Subtract all nines to reply

Russ
"Two-fifteen, no ambulance needed!"
Subtract all nines to reply

1151. What's the difference between PN and 2N transistors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 18:15:46 UTC
From: Tom2000 <tom2000@mindspring.com>
Message-ID: <7qg56uskgesr5i215s9gh6e9r1nogt123a@4ax.com>
Source record: 46594

Folks,

Just trying to get back to hardware experimentation after a long hiatus.
Wow - things have changed in the last 15 or 20 years!

I'm trying to gather a few parts for experimentation. I've noticed that
transistors are available in both 2n and PN varieties, such as 2N2222 vs
PN2222 and 2N5179 vs PN5179. The PN's seem to be cheaper.

What's the difference between the two?

Thanks and 73,

Tom AB9B

1152. Re: I fixed a VF-1

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 18:19:55 UTC
From: Tom2000 <tom2000@mindspring.com>
Message-ID: <f5h56u0915esklu7i3f4qarpojao07s804@4ax.com>
Source record: 46595

On Thu, 7 Feb 2002 15:52:19 +0000 (UTC), donrm@soco.agilent.com wrote:

>Jerry W. O'Dell <jwodell@provide.net> wrote:
>
>> Now I am back on with a steady, well drifty, signal.
>
>I bought one of those VF-1s new in 1954 - think it was
>$19. It wasn't necessary to touch the knob to QSY-
>just blow in one of the calibration holes in the
>top of the case and off it went.
>
>73 Don K6LTS
>donrm@soco.agilent.com

LOL! I used to work traffic nets using one of those things. After the NCS would send me "up 30," folks would complain to the NCS that they could't find me. Heck, it looked like "up 30" to me. But on Mondays, it was probably "up 10" and on Fridays, probably "up 50."

I think the VF-1's frequency scale was the perfect random number generator! <g>

Very 73,

Tom AB9B

1153. HP 200T Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 18:27:54 UTC
From: Walter Treftz <penguino@atlantic.net>
Message-ID: <3C62C72A.3660AD9A@atlantic.net>
Source record: 46589

Info on Hewlett-Packard Audio Osciallator ("Test Oscillator") Model
200-T

I recently pickup up, in a trade, a HP 200T AF osc. A friend tells me
that this
might the the first model of test equipment made by HP and therefore
a real collectors item.

Any suggestions on where to find out more info?

Tks 73 Walt Treftz (N4GL) --- penguino@atlantic.net ---

1154. Re: Mobile Radio Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 20:21:37 UTC
From: "Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net>
Message-ID: <080B0C69FBE23E28.0DA6AF0D83C80716.680297B83530B7BF@lp.airnews.net>
Source record: 46591
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equiptment

On Thu, 07 Feb 2002 02:15:32 -0600, "Clifton T. Sharp Jr."
<clifto@clifto.com> wrote:

>Scott wrote:
>> I use the 2 pin molex connectors from Radio Shack. They have 2
>> versions. Be sure to use the larger one that is good to 20 Amps.
>
>I thought the ARRL standardized on the 8-amp connectors (RS 274-222), and
>that those wouldn't mate with the 20-amp jobs...?
>
>I still have the issue of 220 Notes that gave the details.

8A? Hell, my dualband mobile draws 11A.

Joe Bramblett, KD5NRH
kd5nrh@kd5nrh.net
http://www.kd5nrh.net

1155. Re: WTB:QUANTUM LOOP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 21:55:08 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <a3ut3l02pha@enews3.newsguy.com>
Source record: 46596
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Is that related to an infinitesimal dipole? If so I have a whole box of
them I can sell you cheap!

"Daniel Simpson" <dzan@qwest.net> wrote in message
news:070220020128079016%dzan@qwest.net...
> WTB:QUANTUM LOOP
>
> please email me at:
>
> dzan@qwest.net

1156. Doherty improvement for Power amplifiers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 22:25:10 UTC
From: la8ak.xnd@online.no
Message-ID: <3c62fdf3.89231445@news.online.no>
Source record: 46497

do you have any info about the Doherty arrangement for improving
efficiency in power amplifiers for broadcast transmitters?
Only found http://www.ljdassoc.com/ , but suppose it is wrong place to
look

73
LA8AK
--
remove ,xnd to reply

1157. Re: What's the difference between PN and 2N transistors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 22:33:37 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <a3uvc0$5au$1@knossos.btinternet.com>
Source record: 46499

"Tom2000" <tom2000@mindspring.com> wrote in message
news:7qg56uskgesr5i215s9gh6e9r1nogt123a@4ax.com...
> Folks,
>
> Just trying to get back to hardware experimentation after a long
hiatus.
> Wow - things have changed in the last 15 or 20 years!
>
> I'm trying to gather a few parts for experimentation. I've noticed
that
> transistors are available in both 2n and PN varieties, such as 2N2222 vs
> PN2222 and 2N5179 vs PN5179. The PN's seem to be cheaper.
>
> What's the difference between the two?
>
PN devices are plastic (cheap). 2Ns are metal can.

73, Leon
--
Leon Heller, G1HSM leon_heller@hotmail.con
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

1158. Re: What's the difference between PN and 2N transistors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 22:35:08 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C63011C.D575D581@eznec.com>
Source record: 46498

The PN is in a plastic package, the 2N is metal. The internal chip is the same. The 2N will dissipate more power than the PN, and will have a little more capacitance from the collector (connected to the case) to the outside world. For most purposes they're interchangeable.

Roy Lewallen, W7EL

Tom2000 wrote:
>
> Folks,
>
> Just trying to get back to hardware experimentation after a long hiatus.
> Wow - things have changed in the last 15 or 20 years!
>
> I'm trying to gather a few parts for experimentation. I've noticed that
> transistors are available in both 2n and PN varieties, such as 2N2222 vs
> PN2222 and 2N5179 vs PN5179. The PN's seem to be cheaper.
>
> What's the difference between the two?
>
> Thanks and 73,
>
> Tom AB9B

1159. Re: WTB: Instruction Sheet For Use With The Cahill-Thomas Sanity Meter, Series JM-14 (Manual)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 23:26:13 UTC
From: Richard Daventry <newsgps_email@ntlworld.com>
Message-ID: <T0E88.5573$as2.861227@news6-win.server.ntlworld.com>
Source record: 46500

<noone@nowhere.org> wrote in message
news:mqh36u8ktjam9ovn39v8thl4ufk1ojrknm@4ax.com...
> On Wed, 6 Feb 2002 14:52:39 -0000, "Richard Daventry"
> <newsgps_email@ntlworld.com> wrote:
>
> >
> >"Mike Andrews" <mikea@mikea.ath.cx> wrote in message
> I've found that the metallized bags such as are used to protect our
> expansion cards, hard drives, & etc from ESD are quite capable of
> attenuating the alien rays. The larger ones fit nicely over the head,
> and are semi-transparent so that one can pull the bag completely down
> over one's face in event of a deluge attack.
> Say, why don't you open the case on that Sanity Meter? Maybe some
> pictures of the circuit board could help recreate it. I think that a
> good, working Sanity Meter just might be the answer for detecting when
> the alien rays are present. I really hate to wear my ESD bag all the
> time.

No, I think you have got it wrong. Aliens are not part of the equation. The Sanity Meter is a product of the Cahill-Thomas Manufacturing Co. If it emits rays, they are not alien. If may actually receive, i.e. detect brainwaves, I'm not sure. I think to be absolutely certain no-one is reading your sanity, I think you must continue wearing that ESD bag over your head. That, or keep an eye out for any Sanity Meters in your immediate vicinity. But who says having your sanity read is a bad thing. You may actually benefit from having a Sanity Meter reading I think.

1160. Re: MRF138 - What are They Worth?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 23:39:40 UTC
From: "G. Skiffington" <skiffing@nbnet.nb.ca>
Message-ID: <3C6345FC.597D@nbnet.nb.ca>
Source record: 46501
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.misc,sci.electronics.design

Info from the 1991 edition of the Motorola Electronic Master Selection Guide

MRF138
Pout (W) 30
Pin (W) 0.6
Gps (db) typ 17
@ f (Mhz) 30
IMD d3 (db) typ -34
IMD d11 (db) typ -60
VDD (V) 28
Frequency Range (Mhz) 1.5 - 150
Polarity N-Channel
Package 211-07 (380 SOE FLG)

Looks like it would make a heck of a QRP transmitter final or high power driver.

73 - Gord VE1AJF

1161. Re: WTB: Instruction Sheet For Use With The Cahill-Thomas Sanity Meter, Series JM-14 (Manual)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 23:47:12 UTC
From: Richard Daventry <newsgps_email@ntlworld.com>
Message-ID: <BkE88.5031$H37.995325@news2-win.server.ntlworld.com>
Source record: 46502

Hmmm, I just received the following cryptic message:

R. Scheckley: The Academy.

Wonder what that is about.

1162. Re: What's the difference between PN and 2N transistors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 23:48:45 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <xnE88.13414$QS5.891287@bin2.nnrp.aus1.giganews.com>
Source record: 46504

That isn't quite true. PN are indeed plastic packages. 2N are whatever the EIA standard shows, and often that's a metal can. If you talk about the 2222A and the like, yes the 2N is metal can.

73, Bob K6DDX

1163. Re: What's the difference between PN and 2N transistors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 23:49:11 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u664j6lqjhn12f@corp.supernews.com>
Source record: 46503

About 50 cents.

Jim

> What's the difference between the two?
>

1164. Re: What's the difference between PN and 2N transistors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-07 23:56:51 UTC
From: "Al, N2NKB"
Message-ID: <7vE88.1832$9%6.191863@bgtnsc04-news.ops.worldnet.att.net>
Source record: 46505

Years ago a mechanical engineer told me that plastic transistors can dissipate
heat better than transistors in metal cases, due to the black body effect.
I can't claim that he was correct as it is counter-intuitive.
Al

Roy Lewallen wrote in message <3C63011C.D575D581@eznec.com>...
>The PN is in a plastic package, the 2N is metal. The internal chip is
>the same. The 2N will dissipate more power than the PN, and will have a
>little more capacitance from the collector (connected to the case) to
>the outside world. For most purposes they're interchangeable.
>
>Roy Lewallen, W7EL
>
>Tom2000 wrote:
>>
>> Folks,
>>
>> Just trying to get back to hardware experimentation after a long hiatus.
>> Wow - things have changed in the last 15 or 20 years!
>>
>> I'm trying to gather a few parts for experimentation. I've noticed that
>> transistors are available in both 2n and PN varieties, such as 2N2222 vs
>> PN2222 and 2N5179 vs PN5179. The PN's seem to be cheaper.
>>
>> What's the difference between the two?
>>
>> Thanks and 73,
>>
>> Tom AB9B

1165. Re: What's the difference between PN and 2N transistors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 00:45:30 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C631FAA.39D8FF0F@eznec.com>
Source record: 46506

Heat is transferred by radiation, conduction, and convection. The black case only aids radiation, which isn't a major contributor until the temperature gets very high. (As I recall, the radiative heat transfer goes at something like the fourth power of the temperature.) The larger can of the metal transistor, coupled with the low thermal resistance between the collector and can, aids convection. If a heat sink is applied, the metal can and low thermal resistance aid conduction to the heat sink. Plastic transistors depend largely on conduction of heat through the leads. Data sheets for the transistors, now readily available on the web, will tell you the details.

Roy Lewallen, W7EL

"Al, N2NKB" wrote:
>
> Years ago a mechanical engineer told me that plastic transistors can dissipate
> heat better than transistors in metal cases, due to the black body effect.
> I can't claim that he was correct as it is counter-intuitive.
> Al

1166. Re: What's the difference between PN and 2N transistors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 00:55:10 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C6321EE.EDA2D93F@eznec.com>
Source record: 46507

I apologize for not being more clear. I was referring only to the specific types the poster mentioned. Those two 2N types have a metal can. As Bob says, 2N transistors are ones that meet an EIA standard, and they can have whatever kind of case the standard for that type calls for, sometimes plastic. (For example, the 2N3904 and 2N3906 specifications call for a plastic package.) Some manufactures take the same chip used for a 2N metal cased transistor like the 2N2222, put it in a plastic case, and give it the PN prefix. Because of the alternate package, it no longer meets the EIA specification so isn't given a 2N number.

Roy Lewallen, W7EL

Bob wrote:
>
> That isn't quite true. PN are indeed plastic packages. 2N are whatever the
> EIA standard shows, and often that's a metal can. If you talk about the
> 2222A and the like, yes the 2N is metal can.
>
> 73, Bob K6DDX

1167. Re: Mobile Radio Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 01:10:33 UTC
From: Sylvan Butler <Znospam+noZs_0202@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrna669ce.8hb.Znospam+noZs_0202@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 46508
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equiptment

On Thu, 07 Feb 2002 15:50:18 GMT, Russell C. Nixon <r9c9nixon@mi9nd9spring.com> wrote:
> The RS part number for the 8 amp connectors (a set of male and female)
> is 274-222. The male pin goes in the female shell and the positive
> goes to the side with the point, as was posted here earlier. The RS
> number for the 20 amp connector with the female shell and male pins is
> 274-151. I don't have the RS number for the mating part and RS Online
> isn't cooperating in my search. I do need to get a couple of the

That would be 274-154, IIRC. Funny thing is, radioshack.com is
claiming those parts are an 8amp rating, just like 274-222. So I'm
not sure...

> 100W transceivers. I would like to use the Anderson Power Poles, but
> the RS parts are probably more readily available and have been
> standardized.

The 20amp are not standardized. The 8amp -were- but are they still
the current standard? I thought it had changed or was changing.

The simple solution is for -you- to use the better connector, and
make a couple of adaptor cables. The APPs are *significantly*
better. Not quite as available, but well worth it.

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. ##### change ^ to @ ##### |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Fight terrorism, arm the population!

1168. Re: WTB: Instruction Sheet For Use With The Cahill-Thomas Sanity Meter, Series JM-14 (Manual)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 02:00:12 UTC
From: noone@nowhere.org
Message-ID: <2sb66u0e8vvpef1mdkivte325tbgsmncb6@4ax.com>
Source record: 46509

On Thu, 7 Feb 2002 23:47:12 -0000, "Richard Daventry"
<newsgps_email@ntlworld.com> wrote:

>Hmmm, I just received the following cryptic message:
>
>R. Scheckley: The Academy.
>
>Wonder what that is about.
>
Doggonit, Bob Scheckley was the guy I was trying to remember, not
Fritz Leiber. Both of them excellent in the field, mind you, it's just
that Scheckley is the . . . never mind, I guess my ESD bag was a
little too tight that day.
Speaking of cryptic messages, the title "Infinity" has just leaked
through a hole in my aluminum foil hat (it's so hard to find tin foil
these days). ??

1169. Re: Mobile Radio Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 03:11:47 UTC
From: john graesser <graesser@tca.net>
Message-ID: <u66gge8eqgf7bd@corp.supernews.com>
Source record: 46510

But if you hook a radio drawing 18 amps to the adapter cable thus pulling 18 amps thru both sets of connectors, the 8 amp connector will as a slow blow fuse (if your lucky, as an electric match starting a fire if not) causing no end of problems. The real solution is to wire in two sets of cables, one standard, another hi power for high current radios. None of my equipment will do over 45 watts so I can live with the standard connectors, and honestly I don't work mobile very often over 25 watts. You don't want to be pulling major amps thru a string of marginal connectors.
thanks, John
KC5DWD

>
> The 20amp are not standardized. The 8amp -were- but are they still
> the current standard? I thought it had changed or was changing.
>
> The simple solution is for -you- to use the better connector, and
> make a couple of adaptor cables. The APPs are *significantly*
> better. Not quite as available, but well worth it.

1170. Re: What's the difference between PN and 2N transistors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 03:16:31 UTC
From: john graesser <graesser@tca.net>
Message-ID: <u66gp7ddp9ai5c@corp.supernews.com>
Source record: 46511

"Jim Weir" <jim@rst-engr.com> wrote in message
news:u664j6lqjhn12f@corp.supernews.com...
> About 50 cents.
>
>
> Jim
>
>
> > What's the difference between the two?

A man with a similar sense of humor to mine, when asked what the difference between a regular item and a deluxe item is, my answer is the deluxe costs more.
thanks, John.
KC5DWD

1171. Re: MRF138 - What are They Worth?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 03:29:40 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3C634624.B72F8AB3@sympatico.ca>
Source record: 46512
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.misc,sci.electronics.design

I believe Macom has picked up some of the Motorola line.

bk

Melissa Liberty - Colorado wrote:

> "Cone Killer" <NOSPAM@hotmail.com> bestowed such eternal wisdom upon us by
> saying from <evm88.1961$n27.218816@news1.east.cox.net>:
>
> >These guys might know.
> >
> >http://www.rfparts.com/mototran.html
>
> Thanks, I found that page during a search too, but Motorola doesn't list many
> MRF part numbers anymore, so they may have discontinued the whole line, and
> I'm not sure what the actual demand might be for these, whether anyone even
> uses them anymore.
>
> --
> - Melissa

1172. Re: Smallest QRP Rig?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 03:31:38 UTC
From: Olaf <olaf@mail.powermax-lcd.com>
Message-ID: <op766ukj36630d5tecfo3h2b25drki87sh@4ax.com>
Source record: 46514

On Wed, 06 Feb 2002 23:29:25 -0600, "Joe Bramblett, KD5NRH"
<kd5nrh@kd5nrh.net> wrote:

>On Tue, 05 Feb 2002 14:02:48 +0800, Olaf <olaf@mail.powermax-lcd.com>
>wrote:
>
>>I sent a mail to N4HAY and await the response. Would be really bad if
>>one would have to use a certain browser (and version) only to see a
>>schematic...
>
>I doubt it. More detailed checking appears to show that the pictures
>aren't where the references are pointing. Most likely someone
>
N4HAY answered meanwhile and promised to check the problem. Hope it
will be fixed soon...

73! de Olaf

1173. UHF ATV Amplifier Advise

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 03:52:01 UTC
From: szastoupil@yahoo.com
Message-ID: <44ea7c25.0202071952.60e20960@posting.google.com>
Source record: 46513

Hello. I am looking to homebrew a 70cm 1 watt ATV amplifier. The input is from a Ramsey 100mW TX and would like to boost it up to ~1 watt or a little more. Since it's for ATV, it needs to be a linear amp. I am looking for recommendations on readily available transistors at a decent price. Most likely the final version will be surface mount with a possible exception in the type of transistor package. Resources on FM amplifiers are easy to come by, but I am have a difficult time on a linear version. The input voltage will be ~12V and input/output impedance will be 50ohm. Any help would be appreciated. Thanks in advance.

Scott
KB0KFX

1174. Re: What's the difference between PN and 2N transistors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 04:25:03 UTC
From: gdsnkl@bellatlantic.net
Message-ID: <3c6351c8.16820434@news.bellatlantic.net>
Source record: 46515

On Thu, 7 Feb 2002 21:16:31 -0600, "john graesser" <graesser@tca.net>
wrote:

>> > What's the difference between the two?
>
>A man with a similar sense of humor to mine, when asked what the difference
>between a regular item and a deluxe item is, my answer is the deluxe costs
>more.
>thanks, John.
>KC5DWD
>
Not just consumers with a sense of humor. I once was at the hardware
department of an unnamed store chain (with its headquarters in the
Sears Tower in Chicago).

When I asked the salesman the difference between the $40 electric
sander and the $70 electric sander, he told me that the $70 one was
"much, much better". For this he gets a commission?

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

1175. Re: MRF138 - What are They Worth?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 04:34:30 UTC
From: melissaNo0oOSPAM@dimensional.com
Message-ID: <3c635556$1_2@omega.dimensional.com>
Source record: 46516
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.misc,sci.electronics.design

"G. Skiffington" <skiffing@nbnet.nb.ca> bestowed such eternal wisdom upon us
by saying from <3C6345FC.597D@nbnet.nb.ca>:

>Info from the 1991 edition of the Motorola Electronic Master Selection
>Guide
>
>MRF138
>Pout (W) 30
>Pin (W) 0.6
>Gps (db) typ 17
>@ f (Mhz) 30
>IMD d3 (db) typ -34
>IMD d11 (db) typ -60
>VDD (V) 28
>Frequency Range (Mhz) 1.5 - 150
>Polarity N-Channel
>Package 211-07 (380 SOE FLG)
>
>Looks like it would make a heck of a QRP transmitter final or high power
>driver.
>
>73 - Gord VE1AJF
>

Yes. I was originally thinking of it for using an HT at home and driving it
to 30 watts out on 2 meters. Just need a simple circuit and a clean 28V PS.

--
- Melissa
KW0WW
Somewhere in Colorado

1176. Re: MRF138 - What are They Worth?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 04:37:44 UTC
From: melissaNo0oOSPAM@dimensional.com
Message-ID: <3c635618_2@omega.dimensional.com>
Source record: 46517
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.misc,sci.electronics.design

BTW, I did find my old Motorola data book with the sheets in it for this.

I thought I also had some typical circuits for it somewhere but haven't found those yet. Seems pretty simple for a RF designer/ham though.

--
- Melissa Liberty
KW0WW

1177. Radio Equipment 4 Sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 05:44:38 UTC
From: radiodoc37@aol.com
Message-ID: <20020208004438.16129.00000152@mb-fq.aol.com>
Source record: 46518

For Sale or Trade:
Also Visit:
http://www.docsradioden.com

Complete Yaesu FT101EE station, FT101EE Plastic still on face with AM filter, full output.
Yaesu FV101 External VFO good condition, YO-100 Monitor scope, good condition, FL2100F amplifier
good condition plastic still on face, Landliner Phone Patch/External Speaker, Astatic 1104C
Desk Mic, Manuals, you pay for packing and shipping $1150.00 Obo.

Kenwood TH315A, 220 Mhz handheld, GOOD Nicad battery Pack, Wall charger, speaker mic,
original box and manual, Bad PTT on handheld, speaker mic works PTT fine
$125.00

Kenwood TH215A, 2 meter handheld, GOOD nicad battery pack, wall charger, speaker Mic,
leather holster, original box and manual $125.00 SOLD

Radioshack Simplex repeater controller, Converts your Ham or Business band handheld into
a repeater station. New hardly used, with original box and paperwork.
This unit is no longer available and hard to find $75.00 Obo

Shure Model 777 Slim-X Crystal microphone. In original box with original paperwork and accessories
$50.00

Kenwood TR-2500 Handheld, works fine, no battery pack. Has Plug in AC power supply that supplies 9VDC
to the handheld. This setup is for packet radio use. Has Mic and PTT cable ready to be terminated for
use with your TNC. $60.00

Signal Engineering Thunder 8 electronically steerable 10/11 Mtr. vertical beam.

A unique vertical that has a 2 position switch that provides a N/S or E/W figure 8
radiation pattern with gain and side rejection.
See specs at http://www.signalengineering.com $150.00

Courier Port-A-Lab Watt/SWR/FS and Power meter $30.00

Siltronixs FS-9DX Watt/SWR meter $25.00

Homebrew 10 meter amplifier, Has 3 military versions of the 6146 tube, (availble
from RF parts). Amplifier section is made from a military radio PA, Power supply
section is homebrew. Complete with Metering AM/SSB switch/ Bias control and Schematics
A few watts in produces 150 Watts out SSB and 100 watts on AM and FM. $100.00

Siltronics Model 90 VFO, -6 version $75.00

Cobra 148GTL this is not on the CB band, it is a 10 meter conversion with a digiscan UFO elite
PLL controller/Digital readout. This unit was professionaly realigned for the 10 meter
band and has excellent RX and TX. I have made many DX contacts with this radio $125.00

Heathkit Apache TX-1 AM 10-80 transmitter, built in VFO, Plate modulated 6146 finals(New), modulator section uses a pair of EL34 tubes. In good condition. Plate capacitors need replaced. I have a new pair of plate caps that are included in the deal and new 5R4GYWB rectifiers, manual and schematic $200.00

DynaAudio Dynakit MK3 audio amplifier, output transformer was replaced with a 500 Ohm
ouput transformer for use a transmitter modulator (1) 6AQ5 driving (2) 6550 tubes $150.00

Broadcast Engineering Spotmaster 5 channel mixer. Complete with all plug in cards. $100.00

Pics are available for any of the above items.
Prices do not include shipping or special packing.

~ Mike ~ N6KYD

1178. Services Available

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 06:44:14 UTC
From: Bruce Lane <spammers@buzz.off>
Message-ID: <MPG.16cd1399d64c3dcc9897c3@news.drizzle.com>
Source record: 46519
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

WARNING: SHAMELESS ADVERTISEMENT ALERT.

(Hey, at least I'm honest about it...)

Now that I've finally got my shop together, I think it's time I started to let the ham community know that I am ready to offer small-volume RF services to those who may not have the test equipment, tools, skill, or time to do it themselves.

My specialty will be conversion of older Motorola radios to ham service. However, I am also licensed to make such equipment operable on commercial frequencies (FCC General Radiotelephone + Radar endorsement). Besides the licensing, I spent seven years with Motorola's Comm Sector, and I've got nearly 25 years as an active hamateur under my belt.

I can offer basic test & checkout, recrystalling, alignment, modifications, and minor repair. My base rate is $40/hour with a half-hour ($20) minimum (I think this is at least competitive with the commercial shops). I can also offer a special rate for basic checkout only of $10.00 per radio.

Please keep in mind that I'm still building up my lab, and my stash of manuals and test gear. There may be radios that I cannot service at this time. Mobile-wise, I'm set up for (Motorola) Motrac, Motran, Mocom-70, Micor, Mitrek, and the first-generation Syntor. I can also handle MT500, MX (non-synthesized only at this time), HT90, HT440, and RF Link units.

As time goes on, I hope to add capability to service the later radios such as Syntor X/X 9000, Spectra, Maratrac, and others including GE.

I can be reached at the human-readable address in my signature block, or as sales (at) bluefeathertech dot com.

Thanks for reading.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to what I have now..." (Taki Kogoma)

1179. Re: HP 200T Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 07:06:33 UTC
From: Rick Karlquist <richard@karlquist.removethis.com>
Message-ID: <ZNK88.11859$AV5.132722@rwcrnsc51.ops.asp.att.net>
Source record: 46520

HP's first audio oscillator was the 200A. I've never heard
of a 200T, FWIW. I have never heard of anyone collecting
HP test equipment as collectors items (as opposed to
it being useful as test equipment) except the HP archives,
the Agilent archives, and a few museums, mainly in Silicon
Valley. And I haven't heard of those museums having to
pay any significant money for old stuff. Recently HP
bought the "Garage", but paid market price for it (only
$1.5 million, which is ho-hum in Palo Alto).

Tell your friend to donate it to a museum for a tax writeoff.

Rick N6RK
HP/Agilent 23 years

"Walter Treftz" <penguino@atlantic.net> wrote in message
news:3C62C72A.3660AD9A@atlantic.net...
> Info on Hewlett-Packard Audio Osciallator ("Test Oscillator") Model
> 200-T
>
> I recently pickup up, in a trade, a HP 200T AF osc. A friend tells me
> that this
> might the the first model of test equipment made by HP and therefore
> a real collectors item.
>
> Any suggestions on where to find out more info?
>
> Tks 73 Walt Treftz (N4GL) --- penguino@atlantic.net ---
>

1180. Re: What's the difference between PN and 2N transistors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 07:11:36 UTC
From: Tom2000 <tom2000@mindspring.com>
Message-ID: <8gu66ucp01amegmk9dn84ip2d8nho22sen@4ax.com>
Source record: 46521

On Thu, 07 Feb 2002 10:15:46 -0800, Tom2000 <tom2000@mindspring.com> wrote:

Folks,

Many thanks for all the very informative answers. I learned even more
than I expected to learn.

Very 73,

Tom

1181. Center Fed Custom Built Dipole

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 08:25:22 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3C638B72.749B5584@charter.net>
Source record: 46522

Built to your desired frequency

http://www.angelfire.com/nb/ni4l/

1182. Re: WTB: Instruction Sheet For Use With The Cahill-Thomas Sanity Meter, Series JM-14 (Manual)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 10:06:55 UTC
From: Richard Daventry <newsgps_email@ntlworld.com>
Message-ID: <GpN88.9814$H37.1396646@news2-win.server.ntlworld.com>
Source record: 46523

<noone@nowhere.org> wrote in message
news:2sb66u0e8vvpef1mdkivte325tbgsmncb6@4ax.com...
> On Thu, 7 Feb 2002 23:47:12 -0000, "Richard Daventry"
> <newsgps_email@ntlworld.com> wrote:
>
> >Hmmm, I just received the following cryptic message:
> >
> >R. Scheckley: The Academy.
> >
> >Wonder what that is about.
> >
> Doggonit, Bob Scheckley was the guy I was trying to remember, not
> Fritz Leiber. Both of them excellent in the field, mind you, it's just
> that Scheckley is the . . . never mind, I guess my ESD bag was a
> little too tight that day.
> Speaking of cryptic messages, the title "Infinity" has just leaked
> through a hole in my aluminum foil hat (it's so hard to find tin foil
> these days). ??

Hehehe. Yes, I was reading Robert Sheckley's , "The Academy" (1954) which is a story about a society that after world war destruction decides that the best way to preserve peace is by maintaing the status-quo. In other words, society guards against any original thinking or persons with ideas. I suppose they associate people with ideas or big plans as being dangerous for society. Hitler for instance or Pol Pot would have come into that catagory. So, they invented the Sanity Meter, and above a certain level you had to attend The Academy. Problem is, that place has a claimed 100% success rate but no-one ever comes out of it. And if you ask questions about it's methods or it's policies you are looked upon as being a trouble maker. In the 50's a lot of stories came out piting the individual against controlling governmental set-ups. Just thought I'd see what response I got to asking for the Sanity Meter Instruction Sheet. Obviously a joke posting.

I'm not really a science fiction buff, but I do like Sf. What is "Infinity" about?

Rich.

1183. Re: MRF138 - What are They Worth?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 12:10:43 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <7fP88.201$421.25045@bgtnsc05-news.ops.worldnet.att.net>
Source record: 46524
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.misc,sci.electronics.design

Actually, they are not too bad, if you like building your own. They are 30
Watt 2.0 to 175MHz N-Channel Mosfet Linear Power Amplifier transistors.
Power gain is 17dB, with a typcal efficiency of 40%. They are 100% tested
for load mismatch at all phase angles with 30:1 VSWR. The only downside, if
you can call it that, is that they are a 28 Volt device.
It would be great for a power amplifier in a low power transceiver. I don't
need any of these myself; I have a ton of RF devices!

Pete KE9OA

Bob Wilson <rfwilson@intergate.nospam.bc.ca> wrote in message
news:u641auiurp15de@corp.supernews.com...
> In article <3c61ba17_2@omega.dimensional.com>,
> melissaNo0oOSPAM@dimensional.com says...
> >
> >I came across a static bag of these, new, in my basement. (14 or 15 of
> them
> >from a quick rough count)
> >
> >Does anyone know what they may be worth?
>
>
> Almost nothing. They are relatively ordinary RF transistors and worth only
a
> few bucks each at most.
>
> Bob.
>

1184. Need TIL313 or TIL313P 7 Seg. LED

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 12:11:36 UTC
From: garyh <webpub@fastmail.ca>
Message-ID: <1103_1013170296@basic.bs.webusenet.com>
Source record: 46525

I have searched all over the net but can not find this part. Anyone know where I can find one?

1185. 70 cm ATV

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 13:35:48 UTC
From: Andreas Weller <weller@andreas-weller.de>
Message-ID: <a40k7l$u0r$03$1@news.t-online.com>
Source record: 46526

Hallo!

I'm looking for a PCB Layout an schematics for a 70 cm ATV Transmitter.

Thanks!

Andreas Weller [DF1PAW]

1186. Re: HP 200T Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 15:15:18 UTC
From: n7ws@yahoo.com
Message-ID: <3c63ea1c.209167701@news.triconet.org>
Source record: 46527

On Fri, 08 Feb 2002 07:06:33 GMT, "Rick Karlquist"
<richard@karlquist.removethis.com> wrote:

|HP's first audio oscillator was the 200A. I've never heard
|of a 200T, FWIW.

Before formulating my (slightly incorrect) answer to the original query (in another newsgroup), I did a Google search and found a 200T for sale for $25 and someone else had manuals for sale. It was called a "Telemetry Oscillator." Definately not a "classic."

Wes N7WS

|I have never heard of anyone collecting
|HP test equipment as collectors items (as opposed to
|it being useful as test equipment) except the HP archives,
|the Agilent archives, and a few museums, mainly in Silicon
|Valley. And I haven't heard of those museums having to
|pay any significant money for old stuff. Recently HP
|bought the "Garage", but paid market price for it (only
|$1.5 million, which is ho-hum in Palo Alto).
|
|Tell your friend to donate it to a museum for a tax writeoff.
|
|Rick N6RK
|HP/Agilent 23 years
|
|"Walter Treftz" <penguino@atlantic.net> wrote in message
|news:3C62C72A.3660AD9A@atlantic.net...
|> Info on Hewlett-Packard Audio Osciallator ("Test Oscillator") Model
|> 200-T
|>
|> I recently pickup up, in a trade, a HP 200T AF osc. A friend tells me
|> that this
|> might the the first model of test equipment made by HP and therefore
|> a real collectors item.
|>
|> Any suggestions on where to find out more info?
|>
|> Tks 73 Walt Treftz (N4GL) --- penguino@atlantic.net ---
|>
|
|

1187. Re: MRF138 - What are They Worth?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 17:15:24 UTC
From: cydw@optsource.com
Message-ID: <7bf84faa.0202080915.7edb7300@posting.google.com>
Source record: 46528
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.misc,sci.electronics.design

melissaNo0oOSPAM@dimensional.com (Melissa Liberty - Colorado) wrote in message news:<3c635618_2@omega.dimensional.com>...
> BTW, I did find my old Motorola data book with the sheets in it for this.
>
> I thought I also had some typical circuits for it somewhere but haven't found
> those yet. Seems pretty simple for a RF designer/ham though.

Just so you know... I was just quoted $125.00 each for 18 pcs.
You have an expensive little part on your hands. :o)

1188. SMA plug recommendation?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 18:03:43 UTC
From: cgalbrai <cgalbrai@umich.edu>
Message-ID: <a41n1a$j8a$1@newstest.laserlink.net>
Source record: 46529

Hi gang,

I've never used SMA connectors before. Can someone recommend a favorite type? I am seeing all sorts, with several of the "crimp" or "solder" type. Also, any tips on installing these on RG-174, 58, 8x appreciated! 73, Chris KA8WFC

1189. HP Oscillator from an HP5245L counter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 19:03:31 UTC
From: Tracy <thooker@psl.nmsu.edu>
Message-ID: <a417fu$5u0$1@bubba.NMSU.Edu>
Source record: 46530
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Hi all,
I took the 10544 oscillator out of an HP5245L counter. I also got the small plug in card that was next to it, which seemed to be hooked up to the 'timebase output' switch on the rear of the counter. The switch allows a user to select one of several outputs (10, 1, .1, etc MHz). I think the oscillator itself only puts out 1.000000 Mhz (at something like -20 dBm), so the card must have some multiplier and buffer stages in order to get 10 MHz.

Anybody have a schematic of this little plug in card? I would like to use the oscillator and the card in a small high accuracy frequency standard for my bench.

Thanks,
Tracy

1190. switchbox - audio/Other

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 19:35:33 UTC
From: Richard Valentine <rwvNOSPAM@attbi.com>
Message-ID: <9MV88.11361$fK1.33311@rwcrnsc54>
Source record: 46531

Switchbox with a million combinations and jacks
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1330773164

1191. Re: Need TIL313 or TIL313P 7 Seg. LED

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 19:41:41 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0202081141.517a1f6b@posting.google.com>
Source record: 46532

garyh <webpub@fastmail.ca> wrote in message
news:<1103_1013170296@basic.bs.webusenet.com>...
> I have searched all over the net but can not find this part. Anyone know
> where I can find one?

Well, it's not what I thought it might be, one of those TI readouts with
a latch (and sometimes counter) built in.

It's just an average .3 inch 7-segment readout., common cathode,
with the decimal point on the right. Look it up in an ECG
replacement guide. You can buy an ECG replacement, or look through
some of the catalogs until you find something the right size, and
check if it's a match. I don't know whether it's deliberate or not,
but my experience is that there is fairly standard pinout on LED
readouts, so most likely you only have to verify that it is the same.

If this is to repair something, you may find that it will look
different from the other ones in the unit. If that's a problem,
replace them all (though, I wouldn't use ECG replacements because
of cost if doing this). If this is something new you are building,
you have a lot more potential. As long as you don't pick something
that draws too much current, you could use a bigger readout, which
might be more readily available. You can pick another color (though,
red is most likely to be available). If it doesn't need the decimal
point, where it is won't matter.

Michael VE2BVW

1192. Re: MRF138 - What are They Worth?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 19:53:19 UTC
From: melissaNo0oOSPAM@dimensional.com
Message-ID: <3c642caf_2@omega.dimensional.com>
Source record: 46534
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.misc,sci.electronics.design

cydw@optsource.com (Cyd Weeks) bestowed such eternal wisdom upon us by
saying from <7bf84faa.0202080915.7edb7300@posting.google.com>:

>melissaNo0oOSPAM@dimensional.com (Melissa Liberty - Colorado) wrote in
>message news:<3c635618_2@omega.dimensional.com>...
>> BTW, I did find my old Motorola data book with the sheets in it for
>> this.
>>
>> I thought I also had some typical circuits for it somewhere but haven't
>> found those yet. Seems pretty simple for a RF designer/ham though.
>
>
>Just so you know... I was just quoted $125.00 each for 18 pcs.
>You have an expensive little part on your hands. :o)

Whoa! From who?

--
- Melissa Liberty
Somewhere in Colorado

"...I am opposed to all attempts to license or restrict the arming of
individuals...I consider such laws a violation of civil liberty,
subversive of democratic political institutions, and self-defeating
in their purpose." - Robert Heinlein, in a 1949 letter concerning "Red
Planet"

1193. 120 Mhz Coil, Thank you

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 20:18:08 UTC
From: "john.bean1" <john.bean1@ntlworld.com>
Message-ID: <opW88.6107$YA2.1161845@news11-gui.server.ntli.net>
Source record: 46533

Hello to all

I would like to thank all of you who kindly offered your advice. With your help I have now found the error's in my calculations and at least, should I need to calculate coils for other frequencies in the future, I now know the correct way of calculating them!

Thank you once again

John

1194. Electronic QSL's are APPROVED for DXCC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 21:09:38 UTC
From: Charles Johnston <ctj92@cableone.net>
Message-ID: <3c643e95$1@news.bnb-lp.com>
Source record: 46535
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

A few of us Ham's have been pioneers for some time by offering
electronic QSL card service. Now the ARRL is accepting eQSL's for DXCC
credit.....

http://www.eqsl.cc/qslcard/DXCCInfo.cfm

I qsl 100% electronically....check my web site for - YOUR - card!

--

73 / DX

Charles T Johnston
Prescott, Arizona - U.S.A.
charles@ab7sl.com

AB7SL - Ham Radio Pages
Official W9INN Antennas Page
www.ab7sl.com

1195. Re: Electronic QSL's are APPROVED for DXCC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 21:31:58 UTC
From: Charles Johnston <ctj92@cableone.net>
Message-ID: <3c6443d1$1@news.bnb-lp.com>
Source record: 46536
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

Yes..one must first register with eQSL (even if you never use their
services) to read about this great eQSL / DXCC news breakthrough....

--

73 / DX

Charles T Johnston
Prescott, Arizona - U.S.A.
charles@ab7sl.com

AB7SL - Ham Radio Pages
Official W9INN Antennas Page
www.ab7sl.com

1196. Re: HP Oscillator from an HP5245L counter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 21:56:42 UTC
From: rexa*non*spam*@dnai.com
Message-ID: <f3i86u0pe3bfemh8vl078nhe6d5dfe0mog@4ax.com>
Source record: 46537
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Fri, 8 Feb 2002 12:03:31 -0700, "Tracy" <thooker@psl.nmsu.edu>
wrote:

>Hi all,
>I took the 10544 oscillator out of an HP5245L counter. I also got the small
>plug in card that was next to it, which seemed to be hooked up to the
>'timebase output' switch on the rear of the counter. The switch allows a
>user to select one of several outputs (10, 1, .1, etc MHz). I think the
>oscillator itself only puts out 1.000000 Mhz (at something like -20 dBm), so
>the card must have some multiplier and buffer stages in order to get 10 MHz.
>
>Anybody have a schematic of this little plug in card? I would like to use
>the oscillator and the card in a small high accuracy frequency standard for
>my bench.
>
>Thanks,
>Tracy
>
>

AFAIK the 10544 is a 10 MHz oxco from the 70's. It was later
replaced by the much better 10811. I have an old 5245L and it uses
neither. It has a 1 MHz xtal in an oven with an external oscillator
circuit. Maybe on late versions of the 5245L they offered the 10544
as a high stability option.

Can't help you on the circuit board. Any documentation I might have
would be for the old 1 MHz oscillator.

-Rex, KK6MK

1197. Re: Electronic QSL's are APPROVED for DXCC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 22:34:52 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u68ktftom67cca@corp.supernews.com>
Source record: 46538
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

Now that is weird. Basically, you need to mail the card to yourself for it
to count. hmmm

..

"Charles Johnston" <ctj92@cableone.net> wrote in message
news:3c643e95$1@news.bnb-lp.com...
> A few of us Ham's have been pioneers for some time by offering
> electronic QSL card service. Now the ARRL is accepting eQSL's for DXCC
> credit.....
>
> http://www.eqsl.cc/qslcard/DXCCInfo.cfm
>
> I qsl 100% electronically....check my web site for - YOUR - card!
>
> --
>
> 73 / DX
>
> Charles T Johnston
> Prescott, Arizona - U.S.A.
> charles@ab7sl.com
>
> AB7SL - Ham Radio Pages
> Official W9INN Antennas Page
> www.ab7sl.com
>
>
>
>

1198. MFJ 249 Front cover

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 22:59:03 UTC
From: rob34 <rob34@infinet.com>
Message-ID: <3c64583f$0$39537$4c5ecdc7@news.erinet.com>
Source record: 46539

I have a front cover for a MFJ 249 antenna analyzer.I converted mine quite some time ago to a MFJ 259 and I still have the front cover for it.I will give it to someone for free for shipping costs for anyone interested.I hate to just throw it out.Thank`s,Rob WB8VWI

1199. Re: WTB: Instruction Sheet For Use With The Cahill-Thomas Sanity Meter, Series JM-14 (Manual)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 23:40:10 UTC
From: noone@nowhere.org
Message-ID: <m3o86u00k6ahf2mve9sg103uacv1siubqp@4ax.com>
Source record: 46540

----------snip!----------
>I'm not really a science fiction buff, but I do like Sf. What is "Infinity"
>about?
>
>Rich.
>
>
>
>
>
>
>
Infinity is a SF poem that I found in the year range '69-'73 in one of
the anthology books; Best SF of xxxx, or Worlds of IF, or maybe Ben
Bova's NOVA series. Shoot, I just don't remember, Best SF of xxxx is
prolly the one, tho.
The only things that I can remember about it are the title and the
last 6 words, which are (so ya don't have to ask 8>):
". . . and Christ hangs upon another tree."
I've been haunting second-hand bookstores, libraries, fleamarkets,
yard sales, and SF meets for at least 20 years hoping to find that
poem again. Even the author's name would be a help.
Do you have any clue at all?

thanx
Bob
kc8hpg
BTW, are you a radio operator, sir?

1200. Re: HP Oscillator from an HP5245L counter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-08 23:54:45 UTC
From: Tracy <thooker@psl.nmsu.edu>
Message-ID: <a41oi1$3h8$1@bubba.NMSU.Edu>
Source record: 46541
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Thanks for the response,

This is odd. This particular counter seems to have been factory retrofitted with the 10544 oscillator, but I looked at its output and it is defiantly at 1.0 MHz. There is nothing at 10 or even 5 MHz.

Thanks,

T

"Rex Allers" <rexa*non*spam*@dnai.com> wrote in message news:f3i86u0pe3bfemh8vl078nhe6d5dfe0mog@4ax.com...
> On Fri, 8 Feb 2002 12:03:31 -0700, "Tracy" <thooker@psl.nmsu.edu>
> wrote:
>
> >Hi all,
> >I took the 10544 oscillator out of an HP5245L counter. I also got the small
> >plug in card that was next to it, which seemed to be hooked up to the
> >'timebase output' switch on the rear of the counter. The switch allows a
> >user to select one of several outputs (10, 1, .1, etc MHz). I think the
> >oscillator itself only puts out 1.000000 Mhz (at something like -20 dBm), so
> >the card must have some multiplier and buffer stages in order to get 10 MHz.
> >
> >Anybody have a schematic of this little plug in card? I would like to use
> >the oscillator and the card in a small high accuracy frequency standard for
> >my bench.
> >
> >Thanks,
> >Tracy
> >
> >
>
> AFAIK the 10544 is a 10 MHz oxco from the 70's. It was later
> replaced by the much better 10811. I have an old 5245L and it uses
> neither. It has a 1 MHz xtal in an oven with an external oscillator
> circuit. Maybe on late versions of the 5245L they offered the 10544
> as a high stability option.
>
> Can't help you on the circuit board. Any documentation I might have

> would be for the old 1 MHz oscillator.
>
> -Rex, KK6MK

1201. Re: MRF138 - What are They Worth?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 00:12:55 UTC
From: melissa@NOSPAMdimensional.com
Message-ID: <3c646987_1@omega.dimensional.com>
Source record: 46448
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.misc,sci.electronics.design

cydw@optsource.com (Cyd Weeks) bestowed such eternal wisdom upon us by
saying from <7bf84faa.0202080915.7edb7300@posting.google.com>:

>melissaNo0oOSPAM@dimensional.com (Melissa Liberty - Colorado) wrote in
>message news:<3c635618_2@omega.dimensional.com>...
>> BTW, I did find my old Motorola data book with the sheets in it for
>> this.
>>
>> I thought I also had some typical circuits for it somewhere but haven't
>> found those yet. Seems pretty simple for a RF designer/ham though.
>
>
>Just so you know... I was just quoted $125.00 each for 18 pcs.
>You have an expensive little part on your hands. :o)

Ok, I'd be willing to let these go for a mere $100 each, if someone takes all
14 of them, payable in advance with money order. :-)

--
- Melissa Liberty
Somewhere in Colorado

"...I am opposed to all attempts to license or restrict the arming of
individuals...I consider such laws a violation of civil liberty,
subversive of democratic political institutions, and self-defeating
in their purpose." - Robert Heinlein, in a 1949 letter concerning "Red
Planet"

1202. Re: SMA plug recommendation?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 00:15:17 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C646A05.211D@pop.removethistomailme.net>
Source record: 46542

cgalbrai wrote:
>
> Hi gang,
>
> I've never used SMA connectors before. Can someone recommend a favorite
> type? I am seeing all sorts, with several of the "crimp" or "solder" type.
> Also, any tips on installing these on RG-174, 58, 8x appreciated! 73, Chris
> KA8WFC

I don't fabricate my own SMA cables; they are too easy to come by
ready-made on eBay. You can buy plugs and jacks from
http://www.digikey.com (see http://info.digikey.com/T021/V2/178.pdf) but
again, eBay is the best place to shop for this stuff.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1203. Re: SMA plug recommendation?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 01:13:54 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3C6477D1.7262A915@sympatico.ca>
Source record: 46543

Crimp and Solder types typically refer to the pin itself.
For Crimping you need (should have) a special tool which will probably
cost a few hundred $ and you will need different dies depending on the
cable.

With my experience, you still have to crimp the furrel (for the cable types
you mentioned), which is the sleeve that goes over the ground shield.
Hence you will need a crimp tool for that as well. You can buy inexpensive
crimpers for BNC connectors and you might get away with one of these here.

The only ones I have seen that don't have a furrel are for semi-rigid cables
or cables with tinned braid like suggoflex (or is it succoflex?). These aren't
cheap.

John Miles wrote:

> cgalbrai wrote:
> >
> > Hi gang,
> >
> > I've never used SMA connectors before. Can someone recommend a favorite
> > type? I am seeing all sorts, with several of the "crimp" or "solder" type.
> > Also, any tips on installing these on RG-174, 58, 8x appreciated! 73, Chris
> > KA8WFC
>
> I don't fabricate my own SMA cables; they are too easy to come by
> ready-made on eBay. You can buy plugs and jacks from
> http://www.digikey.com (see http://info.digikey.com/T021/V2/178.pdf) but
> again, eBay is the best place to shop for this stuff.
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

1204. Re: MRF138 - What are They Worth?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 03:38:58 UTC
From: legg@magma.ca
Message-ID: <e715b5cc.0202081938.60500e55@posting.google.com>
Source record: 46544
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.misc,sci.electronics.design

A ham wouldn't have to resort to using a specific numbered part,
flogged at outrageous prices, by vultures. That's one of the skills
you develop as a ham.

Ham organizations are also pretty good at sharing 'found' parts,
between members, to enable and encourage usefull work.

Suggest you auction them on ebay. You'll soon find out what they're
worth, today. Otherwise, bury them in a tin can for somebody else to
(maybe) find in 100 years, when they may have accumulated some
historical value.

RL

melissaNo0oOSPAM@dimensional.com (Melissa Liberty - Colorado) wrote in message
news:<3c635618_2@omega.dimensional.com>...
> BTW, I did find my old Motorola data book with the sheets in it for this.
>
> I thought I also had some typical circuits for it somewhere but haven't found
> those yet. Seems pretty simple for a RF designer/ham though.

1205. Re: Mobile Radio Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 06:23:13 UTC
From: mcalhoun@ksu.edu
Message-ID: <a42f8h$rvm@unix1.cc.ksu.edu>
Source record: 46546

>But if you hook a radio drawing 18 amps to the adapter cable thus pulling 18
>amps thru both sets of connectors, the 8 amp connector will as a slow blow
>fuse (if your lucky, as an electric match starting a fire if not) causing no
>....[snip]....

Does anyone know for what current plain ol' banana plugs and jacks are rated?
I standardized on them for all my radios (up to 100 watts DC for HF) about
20 years ago and have never had any problem of any kind with them (other than
remembering "red plugs into red and black plugs into black"!), and now I'm
wondering if I should have been worrying all these years!

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

1206. You have got to build this in order to believe it!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 06:37:02 UTC
From: braincambre500@yahoo.com
Message-ID: <85a87c6c.0202082237.db6ced2@posting.google.com>
Source record: 46545

Hello all,

Introducing the "Radio Shack Special". Well, that's what I call it.

A few weeks ago I had spotted, from ARRL, an FM VHF regenerative receiver that had two transistors, 2 large and cumbersome coils, and many resistors, pots and capacitors. The PCB was rather large.

I have managed to get this receiver down to a 12 component count!

It works marvalously. I still can't believe it is still functioning with only one transistor (MPF102) and one "small" coil, and a few other components.

I put an LM386 behind it, and the quality in the headphones is an understatement!

The sensitivity, the selectivity and the great audio output is astonding to me. I have build this receiver 5 times, just to reassure myself I am not dreaming.

This has got to be the world's less component count ever!

If you are interested in making this project, I have the complete plans, from beginning to end.

All the parts can be bought at your local Radio Shack Store, except for the tuning capacitor....but that can be handled differently if you don't have one or don't want to purchase one.

While I type, there are approximately 15 people building it now.

I get about 2 e-mails a day. My end goal with this project was to try and get as many people as I can to hear about it....and then make it themselves.

There are unlimited possibilities one can do with a FM VHF receiver... I just decided to receive in the FM band (88-108 MHz), but the rest of the VHF is open!

And so, my friends, if you are a dabbler of small RF projects...this will surely be up on you list...

Welcome yourself to a wonderful journey into the world of a single transistor...you will not be the same...

My e-mail address is braincambre500@yahoocom

If for any reason you are concerned about something in the plans or
just want to let me know at what stage you are in.....on this project,
I will be happy to listen and help.

The complete plans are about 300K...

Let the project begin!

I do thank all of you for the time spent reading...

...your friend, Patrick

1207. Re: HP 200T Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 06:53:09 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <oH398.30786$EP1.2396159@bin6.nnrp.aus1.giganews.com>
Source record: 46447

The 200T was essentially the same as the 200A except for the frequency range. The telemetry band back then covered from about 5 kHz (?) to 70 kHz and this oscillator was set up for about that range.

Bob

1208. Re: HP Oscillator from an HP5245L counter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 07:22:30 UTC
From: Rick Karlquist <richard@karlquist.removethis.com>
Message-ID: <W6498.20714$bh3.138007@rwcrnsc52.ops.asp.att.net>
Source record: 46449
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

The 10544 and 10811 have identical interfaces, so any HP instrument
manual for an instrument with a 10811 will get you the info.
Alternately, you can just measure the pin voltages on the board you
have to tell you what the pin out is. There are two power supplies:
+12V @ 40 mA for the oscillator and 20 to 30V for the oven.
They have separate ground pins, so be sure to ground all pins
that are grounded in your counter.
When the oven is warming up on a 10544, it looks like a 47 ohm
resistor. There is also -5 to +5 electronic frequency control that
gives 1 Hz of tuning range.

I suspect the oscillator puts out 10 MHz and there is a frequency
divider on the interface board to reduce it to 1 MHz. The old HP
oscillators that actually ran at 1 MHz like in the 524 counter had
huge crystals, that were themselves nearly the size of a whole
10544 oscillator.

Rick N6RK
Now with Agilent Labs

"Tracy" <thooker@psl.nmsu.edu> wrote in message
news:a417fu$5u0$1@bubba.NMSU.Edu...
> Hi all,
> I took the 10544 oscillator out of an HP5245L counter. I also got the
small
> plug in card that was next to it, which seemed to be hooked up to the
> 'timebase output' switch on the rear of the counter. The switch allows a
> user to select one of several outputs (10, 1, .1, etc MHz). I think the
> oscillator itself only puts out 1.000000 Mhz (at something like -20 dBm),
so
> the card must have some multiplier and buffer stages in order to get 10
MHz.
>
> Anybody have a schematic of this little plug in card? I would like to use
> the oscillator and the card in a small high accuracy frequency standard
for
> my bench.
>
> Thanks,
> Tracy
>
>
>

1209. Reliable source for crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 10:13:24 UTC
From: "Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net>
Message-ID: <009A55E5CCF194E7.90DB59EF7A30C85A.75470D9E6EFCE560@lp.airnews.net>
Source record: 46450

Anybody have a preference on sources for crystals? I'm looking for several specific values in the 17-18MHz fundamental range. I prefer plug-in crystals and sockets, if that's an issue.

Has anyone done business with http://www.kenselectronics.com ? He lists cut-to-order crystals for $8, so if his quality is good, he's probably the one I'll buy from.

FWIW, here's the complete list of frequencies that I'd find useful, though I need them in pairs (some simplex, some 1MHz offset) suited for third overtone use with a 455kHz IF.

17.34333MHz
17.35666MHz
17.36166MHz
17.50633MHz
17.51333MHz
17.52500MHz
17.53666MHz
17.54330MHz
17.63167MHz
17.64333MHz
17.71833MHz
17.72833MHz
17.75000MHz
17.82500MHz

Joe Bramblett, KD5NRH
kd5nrh@kd5nrh.net
http://www.kd5nrh.net

1210. Re: What's the difference between PN and 2N transistors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 12:45:37 UTC
From: la8ak.xnd@online.no
Message-ID: <3c630d31.93134319@news.online.no>
Source record: 46451

On Thu, 07 Feb 2002 14:35:08 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>The PN is in a plastic package, the 2N is metal. The internal chip is
>the same. The 2N will dissipate more power than the PN, and will have a
>little more capacitance from the collector (connected to the case) to
>the outside world. For most purposes they're interchangeable.
>
>Roy Lewallen, W7EL
>
and for 99% of the applications it doesnt matter which one you choose
from 2N706, 2N2222, PN2222, 2N2926, 2N3394, 2N3704, 2N3904, 2N4401,
MPS2926, MPS3393, MPS3394, BC107, BC108, PBC108, BC147, BC148, BC237,
BC238, BC546, BC547, BC548, ST8013 and many many more -
which we call TUN (transistor universal NPN) in Europe, opposite to
TUP which means PNP type and has almost as many equivalents

Bought 125x MPS3394 in 1970 because Motorola had the cheapest offer,
also some 2N706 from Poly-pak, later some hundreds BC547, got some
hundred ST8013 and later got 3000x BC238 from an OM - they are all TUN

73
LA8AK
--
remove ,xnd to reply

1211. Re: Homebrew Construction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 13:07:41 UTC
From: andy <music@soon.com>
Message-ID: <a436v7avf1@newsg4.svr.pol.co.uk>
Source record: 46452
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew,sci.electronics.misc,uk.radio.amateur
Body handling: HTML body converted to readable text

"Ian Field" wrote in message
news:ZMq78.5591$BU3.1169259@news6-win.server.ntlworld.com...

> And I certainly hope the individual with the .edu domain - is one of the
> student's who's yet to learn

Quite so...

1212. Re: Mini windom antenna (need help)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 14:13:46 UTC
From: brokebob@aol.com
Message-ID: <20020209091346.07187.00000247@mb-mw.aol.com>
Source record: 46453

My all time favorite antenna is a 100' wire fed off center (seem to remember 15%) that worked well on all bands with a home brewed tuner. Guess feed line might have radiated some by that could have been a plus. Twenty feet or so high at the feed point got it done just fine. Getting ready to put up another this week-end.

brokebob@aol.com (broke=not working, retired=not working, retired=broke)

1213. Re: Reliable source for crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 14:34:20 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3C6533D8.C8353972@ay.com.au>
Source record: 46454

Joe,

I order all my custom values from Hy-Q.

They are an aussie company with world wide production and shipping,
quite good service. Off the shelf values are a mere 10c or so each,
customs are about $20 depending on the ppm requirements. Lots of case
styles to choose from.

http://www.hy-q.com/

http://www.hy-q.com.au/ (more info here)

I don't know how helpful this is for people outside VK land though.

Alan

--
Alan Yates
http://www.vk2zay.net/

"Joe Bramblett, KD5NRH" wrote:
>
> Anybody have a preference on sources for crystals? I'm looking for
> several specific values in the 17-18MHz fundamental range. I prefer
> plug-in crystals and sockets, if that's an issue.
>
> Has anyone done business with http://www.kenselectronics.com ? He
> lists cut-to-order crystals for $8, so if his quality is good, he's
> probably the one I'll buy from.
>
> FWIW, here's the complete list of frequencies that I'd find useful,
> though I need them in pairs (some simplex, some 1MHz offset) suited
> for third overtone use with a 455kHz IF.
>
> 17.34333MHz
> 17.35666MHz
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> 17.50633MHz
> 17.51333MHz
> 17.52500MHz
> 17.53666MHz
> 17.54330MHz
> 17.63167MHz
> 17.64333MHz
> 17.71833MHz
> 17.72833MHz

> 17.75000MHz
> 17.82500MHz
>
> Joe Bramblett, KD5NRH
> kd5nrh@kd5nrh.net
> http://www.kd5nrh.net

1214. Re: Reliable source for crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 15:28:26 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u6ag1f4i25jq7b@corp.supernews.com>
Source record: 46456

I doubt that there's a higher quality supplier than International Crystal. They will make anything you want, they know about virtually every radio ever made and can find the right crystal specs in about a millisecond, and they will build the crystal for your specific circuit without any hassle. If it's a homebrew circuit, however, you will need to give them some details about the circuit. They are pretty picky about wanting to be sure your crystal oscillates on 17.34333 and not 17.34334 when you plug it in.

The downside is that they are expensive ($15-25 U.S. typically) and since they build the crystals to order, you will wait at least a couple of weeks, more if their first attempt doesn't meet your specs.

..

"Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net> wrote in message news:009A55E5CCF194E7.90DB59EF7A30C85A.75470D9E6EFCE560@lp.airnews.net...
>
> Anybody have a preference on sources for crystals? I'm looking for
> several specific values in the 17-18MHz fundamental range. I prefer
> plug-in crystals and sockets, if that's an issue.
>
> Has anyone done business with http://www.kenselectronics.com ? He
> lists cut-to-order crystals for $8, so if his quality is good, he's
> probably the one I'll buy from.
>
> FWIW, here's the complete list of frequencies that I'd find useful,
> though I need them in pairs (some simplex, some 1MHz offset) suited
> for third overtone use with a 455kHz IF.
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> 17.54330MHz
> 17.63167MHz
> 17.64333MHz
> 17.71833MHz
> 17.72833MHz
> 17.75000MHz
> 17.82500MHz
>
>

> Joe Bramblett, KD5NRH
> kd5nrh@kd5nrh.net
> http://www.kd5nrh.net

1215. Swap 2-01C for EA53

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 15:31:21 UTC
From: Michael Melland <w9wis@charter.net>
Message-ID: <u6ag1arb94si78@corp.supernews.com>
Source record: 46455

My new HP 410B is a later version of the one I had. I need a spare AC probe tube diode. I have a new Eimac JAN 2-01C I'd trade for a NOS EA53 if anyone can help.

Mike

--
Michael Melland, W9WIS
Winneconne, Wisconsin USA EN54pc
qrp-l #1656 - qrparci # 9875 - iparc #252
ars #1075 - http://www.qsl.net/w9wis

1216. Re: An Ambitious Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 17:05:42 UTC
From: Mark Hall <vze2mhvc@bellatlantic.net>
Message-ID: <3C6555C7.ECDA0769@bellatlantic.net>
Source record: 46457

The 4-1000A is probably the best bang for the buck tube out there! That Screen Grid helps on 10 meters quite a bit too. They'll take serious HV (5KV is safe) on it without worry. With a glowing Red Plate, they're quite happy (NO Parasites Please!) for hours on end. In Class C service (@5 KV or so), we're talking 3 or 4 KW input. Best if grid driven with a tuned input at say 20 watts. They can be had for $100 on the net. Some guys use Furnace blowers to keep the glass from melting. Try that with a Ceramic tube. Hey, Legal Limit is plenty if you have a good antenna.

'73 KI4Z

Yardleyite wrote:

> Chris,
> Take my advice and bite the bullet. Go for a single (dual is better)
> 4-1000A in class B and you'll have an amp you'll be proud of for the rest of
> your life. If you drive it conservatively the tube can last you 40 years or
> more. Besides, they're relatively cheap on the open market, and good pulls are
> always available for a reasonable price.
> If you use a plate supply of say 3900Vat 5.0 or so KVA that will be ample to
> drive the tube to legal limit and then some with 60 watts or so.
> I have one I built up and run 6KV on the plate and have driven it with 200
> watts. It really sings and commands a good signal on the band.
> Just my two cents worth.....
> 73 de Joe Cro N3IBX

1217. Re: An Ambitious Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 17:21:32 UTC
From: Mark Hall <vze2mhvc@bellatlantic.net>
Message-ID: <3C65597D.425BE6CF@bellatlantic.net>
Source record: 46458

Those Microwave Transformers will NOT work.. They're made for Pulse duty and will fry quick when made to provide continuous DC. If the transformer doesn't weigh at least 20 Lbs, a KW isn't going to happen. The FCC will find you.

'73 KI4Z

SideBand wrote:

> Hello OM's...
>
> I've recently decided it's time to build an amplifier for HF. I'm not a
> rich man, so I'm looking to do this as low cost as I can. I'm also very
> unfamiliar with the territory I'm thinking of venturing into now.
>
> I've decided to start with a couple of burnt out microwaves for the power
> supplies. I figure the transformers in them should be enough to run a
> semi-large single tube, or two smaller tubes.
>
> I've also (almost) settled on the Svetlana 4cx800A, or two Svetlana 4cs400A's.
>
> The problem here is that I'm in VERY unfamiliar territory. Does anyone know
> any sources, online or otherwise, where I can get sample schematics for a
> simple one or two tube amp? How about a source for the calculations
> necessary to make this project sing without alot of distortion or
> by-products, and to prolong the life of the tube(s)?
>
> I'm not looking for full legal limit here... 600 watts would be more than
> enough, and 1200 would be dreamy in my particular situation.
>
> Thanks in advance for your time and consideration.
>
> --
> 73 de AB8LR, Chris
>
> http://csotbs.shopiwon.com/ for great deals on computer products.

1218. Re: You have got to build this in order to believe it!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 17:21:45 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0202090921.ab018aa@posting.google.com>
Source record: 46459

braincambre500@yahoo.com (Patrick) wrote in message
news:<85a87c6c.0202082237.db6ced2@posting.google.com>...
> Hello all,
>
> Introducing the "Radio Shack Special". Well, that's what I call it.
>
> A few weeks ago I had spotted, from ARRL, an FM VHF regenerative
> receiver that had two transistors, 2 large and cumbersome coils, and
> many resistors, pots and capacitors. The PCB was rather large.
>
> I have managed to get this receiver down to a 12 component count!
>
> It works marvalously. I still can't believe it is still functioning
> with only one transistor (MPF102) and one "small" coil, and a few
> other components.
>
> I put an LM386 behind it, and the quality in the headphones is an
> understatement!
>
> The sensitivity, the selectivity and the great audio output is
> astonding to me. I have build this receiver 5 times, just to
> reassure myself I am not dreaming.
>
This is so hyped up, it almost seems like you are selling something.
If your design is so hot, and so small, put it on a webpage somewhere,
and let people visit it, and discuss it.

Do a proper bibliography, and let us know exactly what circuit you
started with. Somehow, I suspect you've got ahold of one of
Chrles Kitchin's articles. He's spent a lot of time looking at
regen and superregen articles, and updating them to match present
devices and situations. If it is derived from one of his circuits,
take note that he has tried to improve the performance of the superregen,
and those "unneeded" parts are an attempt at getting around some
of the traditional limitations of the circuit. Take that stuff out,
and you've got nothing special. If you look in the old books and
magazines, you can find a ton of superregen circuits, and virtually
all of them are as simple as you can get. One transistor, and maybe
some audio amplification. Yes, very simple to build, but with
lots of limitations. At the very least, without an RF stage between
the antenna and the superregen detector, the thing will radiate and
interfere with nearby radios and TVs.

Check out the 2001 ARRL Handbook (and probably other editions). It
has one of Charles Kitchin's superregen receivers. Two transistors,

one coil, and an LM386 AF amplifier. I can't remember if this is his latest variation, or there's been something better. Take note that he has tried to improve the selectivity; most superregens are notorious for a wide passband.

I've posted a list of his superregen articles previously, and can't be bothered checking right now. He had an article in the Fall 1994 issue of Communications Quarterly, that I've never seen but assume is an overview of the topic. The article in the Handbook was originally published in QST some years back. He had an article in QEX after that. There might have been another. He's also written a number of articles about regen receivers.

But thanks for reminding me. After I mentioned his work on a previous occasion, he sent me a pdf file of one of his later articles, and I didn't have the computer to view it. I do now, and I must take a look.

Michael VE2BVW

1219. Re: Soldering Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 17:38:41 UTC
From: LRod-removethispart-@pobox.com
Message-ID: <3c655d48.127310797@netnews.worldnet.att.net>
Source record: 46461
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Wed, 06 Feb 2002 21:07:24 -0600, Jim Adney <jadney@vwtype3.org>
wrote:

> You're exactly right, but there is also a company named Eutectic which
> makes soldering and brazing alloys. This may be what he was referring
> to.

How about that. You learn something everyday.

Thanks.

LRod

1220. Re: Reliable source for crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 17:49:59 UTC
From: ae517@FreeNet.Carleton.CA
Message-ID: <a43ng7eil1@freenet9.carleton.ca>
Source record: 46462

"Joe Bramblett, KD5NRH" (kd5nrh@kd5nrh.net) writes:
> Anybody have a preference on sources for crystals? I'm looking for
> several specific values in the 17-18MHz fundamental range. I prefer
> plug-in crystals and sockets, if that's an issue.

I was very happy with the price & service provided by West Xtals in
Kelowna, BC. I made a group purchase of 8 MHz xtals for some S-band
downconverters, and was quite pleased with the product.

--
73 de va3rr/aa8lu
http://www.qsl.net/va3rr

1221. GENERAL ELECTRIC Power Transformer for 200-300 Watt Solid State Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 18:10:57 UTC
From: mnowlen@yahoo.com
Message-ID: <3c6565d5.23890863@news.reston1.va.home.com>
Source record: 46463
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.components

GENERAL ELECTRIC TF4RX02NA Power Transformer

Has four seperate 32 volt @ 4 Amp windings. Connect in series for 128
Volts or +/- 64 Volts Center Tapped. Primary tapped for 109,
115,120,126, and 132 Volts. Potted in military style case with
terminals. Weight: 20 Lbs. Great for 200-300 Watt Solid State Amp.

see picture:
http://members.home.net/mnowlen1/equipment/ge-power-trans.jpg

Very Good Condition, Tested and working.

Two available.
$50 each + Shipping

Please reply via e-mail or telephone

Thanks for reading.

Mike Nowlen
mnowlen@yahoo.com
(703) 716-1363

1222. Re: You have got to build this in order to believe it!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 18:14:11 UTC
From: Another user <at@btinternet.com>
Message-ID: <a43oti$2ak$1@knossos.btinternet.com>
Source record: 46464

One word Spam

"Patrick" <braincambre500@yahoo.com> wrote in message
news:85a87c6c.0202082237.db6ced2@posting.google.com...
> Hello all,
>
> Introducing the "Radio Shack Special". Well, that's what I call it.
>
> A few weeks ago I had spotted, from ARRL, an FM VHF regenerative
> receiver that had two transistors, 2 large and cumbersome coils, and
> many resistors, pots and capacitors. The PCB was rather large.
>
> I have managed to get this receiver down to a 12 component count!
>
> It works marvalously. I still can't believe it is still functioning
> with only one transistor (MPF102) and one "small" coil, and a few
> other components.
>
> I put an LM386 behind it, and the quality in the headphones is an
> understatement!
>
> The sensitivity, the selectivity and the great audio output is
> astonding to me. I have build this receiver 5 times, just to
> reassure myself I am not dreaming.
>
> This has got to be the world's less component count ever!
>
> If you are interested in making this project, I have the complete
> plans, from beginning to end.
>
> All the parts can be bought at your local Radio Shack Store, except
> for the tuning capacitor....but that can be handled differently if
> you don't have one or don't want to purchase one.
>
> While I type, there are approximately 15 people building it now.
>
> I get about 2 e-mails a day. My end goal with this project was to
> try and get as many people as I can to hear about it....and then make
> it themselves.
>
> There are unlimited possibilities one can do with a FM VHF receiver...
> I just decided to receive in the FM band (88-108 MHz), but the rest
> of the VHF is open!
>

> And so, my friends, if you are a dabbler of small RF projects...this
> will surely be up on you list...
>
> Welcome yourself to a wonderful journey into the world of a single
> transistor...you will not be the same...
>
> My e-mail address is braincambre500@yahoocom
>
> If for any reason you are concerned about something in the plans or
> just want to let me know at what stage you are in.....on this project,
> I will be happy to listen and help.
>
> The complete plans are about 300K...
>
> Let the project begin!
>
>
> I do thank all of you for the time spent reading...
>
> ...your friend, Patrick

1223. Re: RS TRC-509 (49.830MHz FM) to 6m conversion?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 18:22:19 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0202091022.10712b75@posting.google.com>
Source record: 46465

"Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net> wrote in message
news:<C8066FEFC53F2319.370B3A277AD7ECC7.8959D980348A883C@lp.airnews.net>...
> Looking for any good info on converting the Radio Shack TRC-509
> 49.830MHz single-channel HT to 6m. My local Rat Shack was getting rid
> of the last of its stock for $5/each, so it seemed like a nice way to
> get a fair bit of a small 6m FM rig prebuilt for dirt cheap :)
>
> It appears to use a 3rd overtone 16.45833MHz crystal for RX, (455kHz
> IF) and a 3rd overtone 16.610MHz crystal for TX. Has anyone already
> done this, and run into any snags with just swapping the crystals and
> putting a BNC in place of the stock antenna?
>
> I'm thinking about possibly adding a small (1W or so) amp and putting
> the whole thing in a bigger case. Any recommendations for amp plans
> to go from its stock (50-100mW?) output to 1W?
>
>
>
> Joe Bramblett, KD5NRH
> kd5nrh@kd5nrh.net

People have discussed this sort of conversion here before. I remember
them, but couldn't think of anything specific. While checking
for something else, I came upon a post of mine where I reposted someone's
comments. Going to dejanews/google with the subject, I got a lot of
hits, and I don't feel like sorting them out. Go to
http://groups.google.com and use "49 MHz to 6 Meters" as the keywords.

This post was the one that I saved at one point because of it's depth:

http://groups.google.com/groups?q=MC3357+49+MHz+to+6+Meters&hl
en&selm=4ngi71%24kev%40vixen.cso.uiuc.edu&rnum=1

(don't forget to paste the two lines together)

The crystal controlled ones don't seem to be a problem converting.
But when people have looked into the multi-channel ones, they've found
them to be too much trouble.

I just suddenly realized that I haven't seen the 49Mhz walkie talkies
advertised in the Radio Shack flyer in some time. I hope they aren't
going off the market, because they are cheap enough and in a good
frequency range to be useful for other things. Of course, if
the FRS drives the 49Mhz units off the market, maybe they'll show
up at garage sales?

I figure when the FRS units drop enough in price (they haven't got to that point yet), I'll buy one to see what's inside. Since they are much higher in frequency, I think they have potential to be used with a transverter for the higher bands.

Michael VE2BVW

1224. Re: Soldering Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 18:28:45 UTC
From: spagnet@austin.rr.com
Message-ID: <xTd98.124449$XZ1.5298047@typhoon.austin.rr.com>
Source record: 46466

If you have a choice of clipping back to fresh wire, I would do it. Any method used to solder oxidized wire will be a compromise and can degrade long-term reliability.

KI5XW/AE

"W4pqw HS" <w4pqwhs@aol.com> wrote in message news:20020205080508.25527.00001291@mb-ci.aol.com...
> >Aloha, anyone got any suggestions for soldering weathered stranded wire?
>
> I have used the circuit board etchant sold by Radio Shack..You will be able to
> tell if it is working in a minute or so.. 73 Hal W4PQW

1225. Delta hetrodye

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 20:05:13 UTC
From: kt Chan <ktchan@hk.gin.net>
Message-ID: <3C6580F9.4E303400@hk.gin.net>
Source record: 46460

I remember that long ago, I read about a project in magazine "Wireless World",
about a project home brew shortwave receiver.

The project is transistor and tube mixed.
Local OSC is a 10 MHz crystal and multiplied to more then 30 MHz.
The first IF will be with in 1 to 2 Mhz. The dial for these is a MHz dial.

The second IF is a receiver from 1 to 2 Mhz, the tuning is the Khz dial.

Then the normal 465Khz if and the usual stuff.

Did any homebrewer remember the project?

Regards

K.T.Chan

1226. Re: What's the difference between PN and 2N transistors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 20:29:20 UTC
From: la8ak.xnd@online.no
Message-ID: <3c6569fe.247986425@news.online.no>
Source record: 46467

On Sat, 9 Feb 2002 03:35:27 GMT, ehramm@dk3uz.ampr.org (Edmund H.
Ramm) wrote:

>In <7qg56uskgesr5i215s9gh6e9r1nogt123a@4ax.com> Tom2000 <tom2000@mindspring.com> writes:
>
>> [...]
>> I've noticed that
>> transistors are available in both 2n and PN varieties, such as 2N2222 vs
>> PN2222 and 2N5179 vs PN5179.
>> [...]
>> What's the difference between the two?
>
> The 2N2222 has a metal case, while the PN2222's is plastic. They also
>have a different pin-out (lead-out?).
>
> 73, Eddi ._._.

preferably like VN2222 ....

73, la8ak
--
remove ,xnd to reply

1227. Replacing an Icom-725 microphone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 22:40:41 UTC
From: gil <gilpi@mindspring.com>
Message-ID: <a4488l$mo5$1@slb1.atl.mindspring.net>
Source record: 46470

Whats a good microphone replacement for an Icom 725 other than an Icom mike?
I hear most common microphones are not a good match for Icoms.

Thanks in advance,

Gil

1228. Re: AntiSpam Test

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-09 23:13:30 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c65abd5.711167632@news.erols.com>
Source record: 46468

<Snip>

I must say to the original poster that ALL the advise posted here
has been worthwhile, IMHO. but again, the problem I've had is that
I didn't start out smart so now, since I use the same ISP, I'm stuck
with my mistake no matter changes I might make as the old or "real"
e-mail address still floats around out there.

I do have financial advantages from sticking with this ISP, so
spam is the price I pay. (Monthly checking account debits mean
no credit card usage and only 15.00/mo. They upped to 19.00
but as a debit I fell through the cracks I guess, although I do have
a contract of sorts.-- old to a prior owner.) The price I pay is spam.

Reticulum

Remove "your.hat" when replying via e-mail

1229. Dumb Question, Answer Please.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 00:27:34 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c65bb49.715124641@news.erols.com>
Source record: 46469

Greetings,

I run a FT-980 along with a FL2100-B amp. Although interface cables do exist (I think), I don't have them. Instead I just flip the operate/stndby switch ON/OFF as needed. Somewhere I read you could more easily just replace the jumper wire on the back with a foot pedal. Seems reasonable. Remember them saying you could get one at the Rat Shack, Now I went and got one(cat# 44-610d) but this looks like it'll burn in a second. The cable is a simple mini-plug with the typical very fine stranded wrapped around an even smaller wire "core". Obviously I would snip the miniplug and expose the wires. I think you all know what I mean. I typically run about 500W PEP. Am I gonna fry something (my foot? or worse my rig/amp) if I try and replace a 14AWG jumper with this flimsy thing? Maybe not, but would like a reply or two from the ng first before I risk it. After all, we're talking about a grand worth of shack equip. vs. a 4.00 switch. Feedback??

Thx. es 73 de KG4JBM/ Andrew

Reticulum

Remove "your.hat" when replying via e-mail

1230. Re: RS TRC-509 (49.830MHz FM) to 6m conversion?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 01:11:28 UTC
From: "Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net>
Message-ID: <45C025F417EF5DAB.1CCF9100F89FF43A.AB221AE99A6CF125@lp.airnews.net>
Source record: 46471

On 9 Feb 2002 10:22:19 -0800, blackm00@cam.org (Michael Black) wrote:

>http://groups.google.com

Thanks, I'd tried a regular Gooogle search, and never really got any
specifics. I'm not sure why it didn't occur to me to try the
newsgroup search.

Joe Bramblett, KD5NRH
kd5nrh@kd5nrh.net
http://www.kd5nrh.net

1231. Re: Delta hetrodye

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 01:24:24 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0202091724.22908c22@posting.google.com>
Source record: 46472

kt Chan <ktchan@hk.gin.net> wrote in message news:<3C6580F9.4E303400@hk.gin.net>...
> I remember that long ago, I read about a project in magazine "Wireless
> World",
> about a project home brew shortwave receiver.
>
> The project is transistor and tube mixed.
> Local OSC is a 10 MHz crystal and multiplied to more then 30 MHz.
> The first IF will be with in 1 to 2 Mhz. The dial for these is a MHz
> dial.
>
> The second IF is a receiver from 1 to 2 Mhz, the tuning is the Khz dial.
>
> Then the normal 465Khz if and the usual stuff.
>
> Did any homebrewer remember the project?
>
> Regards
>
> K.T.Chan

My 1978 edition of "Amateur Radio Techniques" (a compendium of material
from the Technical Topics column in the RSGB's Radio Communication)
mentions a "Deltahet" by VK2AZN in "Radio, Television and Hobbies",
though no date of the original article is given.

It's basically a Wadley-loop that showed up in the Racal receiver, and
then some transistor receivers, like the FRG-7 and the Barlow-Wadley
XC-300 (or number close to that) portable.

The scheme eliminates all those crystals you'd need in a receiver like
the R390, where the tuning covers a fixed 500KHz range, and then
there's a converter ahead of it. You need one crystal for each 500KHz
range. The Wadley Loop came along before synthesizers were common,
and by adding a conversion to the signal path, you can get away with
a tuneable oscillator and a 500KHz crystal to replace all those crystals.

The block diagram and frequency scheme is identical to the Wadley loop
as used in the Racal receiver, so instead of me explaining it again,
see a previous post of mine on the topic at:

http://groups.google.com/groups?selm=blackm00-1604001411420001%
40dialup-271.hip.cam.org&output=gplain

Be sure to paste the two lines together to get the full URL.

Michael VE2BVW

1232. Re: Dumb Question, Answer Please.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 01:36:21 UTC
From: la8ak.xnd@online.no
Message-ID: <3c65ce06.7788341@news.online.no>
Source record: 46473

On Sun, 10 Feb 2002 00:27:34 GMT, Cathexis@yourhaterols.com
(Reticulum) wrote:

>
> Greetings,
>
> I run a FT-980 along with a FL2100-B amp. Although interface cables
>do exist (I think), I don't have them. Instead I just flip the operate/stndby
>switch ON/OFF as needed. Somewhere I read you could more easily just
> replace the jumper wire on the back with a foot pedal. Seems reasonable.
>Remember them saying you could get one at the Rat Shack, Now I went and
> got one(cat# 44-610d) but this looks like it'll burn in a second. The cable is
>a simple mini-plug with the typical very fine stranded wrapped around an even
>smaller wire "core". Obviously I would snip the miniplug and expose the wires.
>I think you all know what I mean. I typically run about 500W PEP. Am I gonna
>fry something (my foot? or worse my rig/amp) if I try and replace a 14AWG
>jumper with this flimsy thing? Maybe not, but would like a reply or two from
>the ng first before I risk it. After all, we're talking about a grand worth of
>shack equip. vs. a 4.00 switch. Feedback??
>
> Thx. es 73 de KG4JBM/ Andrew
>
> Reticulum
>

well, what is dumb is the subject, if you want a reply, please use
proper subjects

--
remove ,xnd to reply

1233. Re: Replacing an Icom-725 microphone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 01:50:28 UTC
From: "aa8wl@home.com" <aa8wl@home.com>
Message-ID: <3C65FDF5.25473D70@home.com>
Source record: 46474

An Astatic D-104 works well on my 725. TNX DE AA8WL

gil wrote:
>
> Whats a good microphone replacement for an Icom 725 other than an Icom
> mike?
> I hear most common microphones are not a good match for Icoms.
>
> Thanks in advance,
>
> Gil

1234. Re: Dumb Question, Answer Please.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 02:00:57 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c65d2a8.721108549@news.erols.com>
Source record: 46475

On Sun, 10 Feb 2002 01:36:21 GMT, la8ak.xnd@online.no (J M Noeding) wrote:

>On Sun, 10 Feb 2002 00:27:34 GMT, Cathexis@yourhaterols.com
>(Reticulum) wrote:
>
>>
>> Greetings,
>>
>> I run a FT-980 along with a FL2100-B amp. Although interface cables
>>do exist (I think), I don't have them. Instead I just flip the operate/stndby
>>switch ON/OFF as needed. Somewhere I read you could more easily just
>> replace the jumper wire on the back with a foot pedal. Seems reasonable.
>>Remember them saying you could get one at the Rat Shack, Now I went and
>> got one(cat# 44-610d) but this looks like it'll burn in a second. The cable is
>>a simple mini-plug with the typical very fine stranded wrapped around an even
>>smaller wire "core". Obviously I would snip the miniplug and expose the wires.
>>I think you all know what I mean. I typically run about 500W PEP. Am I gonna
>>fry something (my foot? or worse my rig/amp) if I try and replace a 14AWG
>>jumper with this flimsy thing? Maybe not, but would like a reply or two from
>>the ng first before I risk it. After all, we're talking about a grand worth of
>>shack equip. vs. a 4.00 switch. Feedback??
>>
>> Thx. es 73 de KG4JBM/ Andrew
>>
>> Reticulum
>>
>
>well, what is dumb is the subject, if you want a reply, please use
>proper subjects
>
Well,.... not sure how to take that. If you mean I'm showing poor
"netiquette", them allow me to point out your usage of the following:
a. Initializing a sentence in lower case.
b. Use of run-on sentence (s). Separate "subject" from "if" as example.
c. Lack of a period at sentence ending.

Further, I don't consider the subject inappropriate and your Mama might've
taught you something about "glass houses" and those who live in them.
If you're a known troll then this is the best you'll get ought of me. Still
waiting for a meaningful response. Thx.

KG4JBM/ Andrew
>
>--
>remove ,xnd to reply

Reticulum

Remove "your.hat" when replying via e-mail

1235. Re: Reliable source for crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 03:24:43 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0202091924.670dc038@posting.google.com>
Source record: 46476

"Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net> wrote in message
news:<009A55E5CCF194E7.90DB59EF7A30C85A.75470D9E6EFCE560@lp.airnews.net>...
> Anybody have a preference on sources for crystals? I'm looking for
> several specific values in the 17-18MHz fundamental range. I prefer
> plug-in crystals and sockets, if that's an issue.
>
> Has anyone done business with http://www.kenselectronics.com ? He
> lists cut-to-order crystals for $8, so if his quality is good, he's
> probably the one I'll buy from.
>
> FWIW, here's the complete list of frequencies that I'd find useful,
> though I need them in pairs (some simplex, some 1MHz offset) suited
> for third overtone use with a 455kHz IF.
>
> 17.34333MHz
> 17.35666MHz
> 17.36166MHz
> 17.50633MHz
> 17.51333MHz
> 17.52500MHz
> 17.53666MHz
> 17.54330MHz
> 17.63167MHz
> 17.64333MHz
> 17.71833MHz
> 17.72833MHz
> 17.75000MHz
> 17.82500MHz
>
>
> Joe Bramblett, KD5NRH
> kd5nrh@kd5nrh.net
> http://www.kd5nrh.net

But what are these for? They can be for the conversion of a 49MHz
walkie talkie, like you asked about in another thread, because they
have 10.7Mhz first IFs.

Since they work to the upper part of 6 meters, are they for
radio control use? If they are, perhaps they are crystals you
can buy off the shelf, just like you once were able to buy CB
crystals for some rigs in pegboard packages? I have no idea
if they still make commercially made RC units for 6 meters, but
you might check a hobby shop.

Michael VE2BVW

1236. Re: Reliable source for crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 04:03:10 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u6bs852cpcnoc7@corp.supernews.com>
Source record: 46478

"Michael Black" <blackm00@cam.org> wrote in message
news:6447bcd3.0202091924.670dc038@posting.google.com...

> But what are these for? They can be for the conversion of a 49MHz
> walkie talkie, like you asked about in another thread, because they
> have 10.7Mhz first IFs.

I hadn't picked up on that. He said 455 Kc IF like it was single conversion. But I can't picture going from 6 meters down to 455 in one whack - it just flat wouldn't work, so clearly there is another IF or something else going on here.

That being said, I guess I change my wishy-washy recommendation of ICM. Based on your question and the (limited) data you have given, the ONLY way you are going to get crystals that work is to call International with the make and model of the radio, and the OPERATING frequency you want. I had done a back of the envelope that this was going to cost you $400 or so at ICM, but $400 for crystals that work is probably better than $200 for crystals that don't.

If you still decide to go the cheap charlie way, buy one pair and see that it doesn't work. Then re-do your calculations and buy one more pair. You can't return made to order crystals, so don't go out and get two dozen crystals until you are sure.

..

1237. Re: Dumb Question, Answer Please.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 11:35:15 UTC
From: la8ak.xnd@online.no
Message-ID: <3c665a5e.43722054@news.online.no>
Source record: 46479

On Sun, 10 Feb 2002 02:00:57 GMT, Cathexis@yourhaterols.com
(Reticulum) wrote:

>On Sun, 10 Feb 2002 01:36:21 GMT, la8ak.xnd@online.no (J M Noeding) wrote:
>
>>On Sun, 10 Feb 2002 00:27:34 GMT, Cathexis@yourhaterols.com
>>(Reticulum) wrote:
>>
>>>
>>> Greetings,
>>>
>>> I run a FT-980 along with a FL2100-B amp. Although interface cables
>>>do exist (I think), I don't have them. Instead I just flip the operate/stndby
>>>switch ON/OFF as needed. Somewhere I read you could more easily just
>>> replace the jumper wire on the back with a foot pedal. Seems reasonable.
>>>Remember them saying you could get one at the Rat Shack, Now I went and
>>> got one(cat# 44-610d) but this looks like it'll burn in a second. The cable is
>>>a simple mini-plug with the typical very fine stranded wrapped around an even
>>>smaller wire "core". Obviously I would snip the miniplug and expose the wires.
>>>I think you all know what I mean. I typically run about 500W PEP. Am I gonna
>>>fry something (my foot? or worse my rig/amp) if I try and replace a 14AWG
>>>jumper with this flimsy thing? Maybe not, but would like a reply or two from
>>>the ng first before I risk it. After all, we're talking about a grand worth of
>>>shack equip. vs. a 4.00 switch. Feedback??
>>>
>>> Thx. es 73 de KG4JBM/ Andrew
>>>
>>> Reticulum
>>>
>>
>>well, what is dumb is the subject, if you want a reply, please use
>>proper subjects
>>
> Well,.... not sure how to take that. If you mean I'm showing poor
>"netiquette", them allow me to point out your usage of the following:
> a. Initializing a sentence in lower case.
> b. Use of run-on sentence (s). Separate "subject" from "if" as example.
> c. Lack of a period at sentence ending.
>
> Further, I don't consider the subject inappropriate and your Mama might've
>taught you something about "glass houses" and those who live in them.
>If you're a known troll then this is the best you'll get ought of me. Still
>waiting for a meaningful response. Thx.
>

> KG4JBM/ Andrew
>>
>>--
>>remove ,xnd to reply
>
your words, but if you want reply a suggestion for subject is:
" FT-980 with a FL2100-B"
--
remove ,xnd to reply

1238. Re: Replacing an Icom-725 microphone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 12:17:58 UTC
From: Henry Gernhardt/Andrea Winship <hcg_NOSPAM_alw@earthlink.net>
Message-ID: <3C6664D2.C6F5BEC@earthlink.net>
Source record: 46480

Folks---

> > Whats a good microphone replacement for an Icom 725 other than an
> > Icom mike? I hear most common microphones are not a good match for
> > Icoms.

> An Astatic D-104 works well on my 725. TNX DE AA8WL

I have a D-104 that I use with my Kenwood TS-830S, along with a Shure mic (plastic housing, tapered cylinder mic head about 1.5" dia at the head and 2--2.5" long head). The Shure mic gives me a nice, pleasant signal to which to listen for ragchewing and net ops, whereas the Astatic has attenuated low-end response and gives a tinny, punchy feel to the audio (much less pleasant for casual ops) which I've been told is good for pileups.

My suggestion: Find out what impeadance the rig looks for in a mic, then match the mic you want to that impeadance. Shouldn't be much more difficult than putting a transformer or other such in line.

Good luck,

Henry C. Gernhardt, III

1239. Re: Soldering Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 12:37:51 UTC
From: Mark Hall <vze2mhvc@bellatlantic.net>
Message-ID: <3C66687D.49D1DDCC@bellatlantic.net>
Source record: 46481
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I'd used Acid Flux (The liquid kind you buy in a bottle for Plumbers)
initially. Soak it in the stuff for a minute or so, then use a torch to burn it
off. Do that a couple times then rinse it off. Then Solder it with your
standard Rosin flux based 60/40 solder and a big Weller pistol grip solder gun.
Never a problem.. works every time for me.

'73 KI4Z

J Titcomb wrote:

> Aloha, anyone got any suggestions for soldering weathered stranded wire? I'm
> trying to revive my G5RV which blew down during the last storm here. I've
> tried wire brushing it, sanding it, using flux...none of these work. Is
> there some homebrew secret for cleaning corrosion from copper wire, making
> it like new so it can be soldered? Some acid wash or something? Mahalo, I
> appreciate the help.
>
> Jim KH6IX

1240. Re: AntiSpam Test

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 14:50:38 UTC
From: N/A <not@vailable.int>
Message-ID: <2Nv98.8948$VX1.2660451@typhoon.atl.ipsvc.net>
Source record: 46482

On Saturday 09 February 2002 18:13, `Reticulum' of
`Cathexis@yourhaterols.com' posted on
`rec.radio.amateur.homebrew' USENET newsgroup wrote:

> <Snip>
>
> I must say to the original poster that ALL the advise
> posted here
> has been worthwhile, IMHO. but again, the problem I've had is
> that I didn't start out smart so now, since I use the same ISP,
> I'm stuck with my mistake no matter changes I might make as the
> old or "real" e-mail address still floats around out there.
>
> I do have financial advantages from sticking with this
> ISP, so
> spam is the price I pay. (Monthly checking account debits mean
> no credit card usage and only 15.00/mo. They upped to 19.00
> but as a debit I fell through the cracks I guess, although I do
> have a contract of sorts.-- old to a prior owner.) The price I
> pay is spam.
>
> Reticulum
>
> Remove "your.hat" when replying via e-mail

Can you temporarily send some e-mails with attachment to fill
your e-mail accounts so that any other future incoming e-mails
will be rejected since your e-mail account exceeds the given
quotas. Meanwhile, open a free e-mail account from HotMail.com
and use it for about a month before you clean your over quota
e-mail account from your ISP and see if you still get a lot junk
e-mails. Since I did this, my e-mail account went back to
normal, i.e no more junky e-mails. This may or may not work for
you, though.

1241. Re: AntiSpam Test

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 14:54:32 UTC
From: N/A <not@vailable.int>
Message-ID: <IQv98.8949$VX1.2661933@typhoon.atl.ipsvc.net>
Source record: 46483

On Thursday 07 February 2002 02:24, `Doug Smith' of
`w9wi@linux1.localdomain' posted on `rec.radio.amateur.homebrew'
USENET newsgroup wrote:

> On Wed, 06 Feb 2002 16:31:27 GMT, Jerry Flanders
> <jflanders2@home.com> wrote:
>>I will be getting a new ISP and address within the next couple
>>of weeks and have been wondering how to set it up to avoid spam
>>and yet let people on the usenets contact me. Any
>>recommendations?
>
> There's no particularly good answer to this.
>
> NEVER, NEVER, NEVER put your email address in a public place.
> Configure
> your newsreader with a non-existant address - I use "me". If
> your newsreader forces you to use a syntatically-correct
> address I'd use
> something at 81832.com. (a Chinese ISP that harbors spammers
> and deserves every piece of spam they'll get if you do that...)
>
> DO NOT put your email address on your webpage. At least not in
> text form. There was a hint in QST a few months ago about
> putting it up with
> JavaScript. It's a bit easier to use Windows Paint to draw a
> *picture* with the text of your email address & put that
> picture up.
>
> NEVER reply to spam or use the "remove" address. If you're
> reasonably confident you know what ISP the spam was sent from,
> or that any websites mentioned in the spam are hosted by
> legitimate companies, it's worthwhile to send copies of the
> spam (with all headers) to "abuse" @ those ISPs.
>
> Don't join any mailing lists that post archives to the Web,
> unless those lists also hide all email addresses in postings.
>
> You probably can't prevent it altogether.
>
> People you thought were friends will put a "send email to my
> friend Jerry"
> link on their websites with your email address on it. You'll
> join a mailing list with no archives - and a spammer will join
> the list just long enough to steal the addresses of the regular

> posters.

When your friends have put your e-mail address on their address books and when one of your friends' computer got spammed virus to steal addresses from his/her address book, then you will get spammed e-mails soon.

1242. Re: HP Oscillator from an HP5245L counter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 17:20:38 UTC
From: Norm Mann <folder0735@hotmail.com>
Message-ID: <3c66ac1d$0$188@news.impulse.net>
Source record: 46484
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

"Tracy" <thooker@psl.nmsu.edu> wrote in message
news:a417fu$5u0$1@bubba.NMSU.Edu...
> Hi all,
> I took the 10544 oscillator out of an HP5245L counter. I also got the
small
> plug in card that was next to it, which seemed to be hooked up to the
> 'timebase output' switch on the rear of the counter. The switch allows a
> user to select one of several outputs (10, 1, .1, etc MHz). I think the
> oscillator itself only puts out 1.000000 Mhz (at something like -20 dBm),
so
> the card must have some multiplier and buffer stages in order to get 10
MHz.
>
> Anybody have a schematic of this little plug in card? I would like to use
> the oscillator and the card in a small high accuracy frequency standard
for
> my bench.

Which "little plug in card"? The "original" HP5245L had a crystal oven with a "little plug in card" next to it in the A26 slot. This card had two circuits, the osc/agc loop and a "trigger" (looks like a distribution amplifier?) Both of these circuits worked at 1 MHz. The next "little plug in card" over (in the A27 slot) was the x10 multiplier.
Since you appear to have a modified version, with an oscillator instead of a crystal oven, I'd be guessing that the A26 card was left in place, using the osc. circuit as a buffer amp. The output of the A26 osc/agc loop went to a contact on the "mode" switch. The common of the "mode" switch was connected to the "trigger" amp input on the A26 card.
I doubt that my old schematic would match your card, but the pinout info and voltages may be useful. Would these be enough help?

-CB

1243. Re: An Ambitious Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 18:28:22 UTC
From: mcalhoun@ksu.edu
Message-ID: <a46e46$eoo@unix2.cc.ksu.edu>
Source record: 46485
Body handling: HTML body converted to readable text

<

1244. tube specs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 19:58:18 UTC
From: John Spindler <aerosci@chicagonet.net>
Message-ID: <u6dkdm5gjvge4c@corp.supernews.com>
Source record: 46486

Need spec sheet for an EIMAC 4-65A.

Jack W9RNU

1245. Digital Codes f/ Standard 5718DA??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 20:46:14 UTC
From: Douglas Kilgore <dougkilgore@attbi.com>
Message-ID: <3C66DBF3.23A22C23@attbi.com>
Source record: 46487
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur

I have a Standard C5718DA Dual Band transciever with CMP843A microphone. The radio was manufactured by Marantz for Standard. The radio is controlled by the microphone which communicates with the main body of the radio with serial digital codes. These codes have not been published in the owner's manual.

I have tried to obtain the codes from Standard service when they were in business with no luck. I have tried the Yaesu - Vertex service after they bought out Standard. The Marantz web page is for audio equipment now.

Can anyone provide me with the codes? Or make suggestions on how to contact the manufacturer in Japan? Or any other source for this info?

Doug Kilgore KD5OUG
KD5OUG@arrl.net

1246. Re: tube specs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 21:48:50 UTC
From: la8ak.xnd@online.no
Message-ID: <3c66ea4a.80571798@news.online.no>
Source record: 46488

On Sun, 10 Feb 2002 13:58:18 -0600, "John Spindler"
<aerosci@chicagonet.net> wrote:

>Need spec sheet for an EIMAC 4-65A.
>
>Jack W9RNU
>
>
try http://frank.nostalgiaair.org/sheets4.html

73
LA8AK
--
remove ,xnd to reply

1247. Re: Reliable source for crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 22:23:07 UTC
From: "Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net>
Message-ID: <F798C9D66C1AA72F.B05E255DDF8CDCBF.2D39554C42B168D9@lp.airnews.net>
Source record: 46489

On 9 Feb 2002 19:24:43 -0800, blackm00@cam.org (Michael Black) wrote:

>But what are these for? They can be for the conversion of a 49MHz
>walkie talkie, like you asked about in another thread, because they
>have 10.7Mhz first IFs.

How do you figure? I'm looking at the innards of my TRC-509 right
now, and the crystals here are 16.610MHz (TX) and 16.45833MHz. (RX)

Unless I'm missing something, that comes out to
TX Freq=3(TX)=49.83MHz
RX Freq=3(RX+IF)=49.83MHz

Which would make IF=455kHz. Am I missing something?

Joe Bramblett, KD5NRH
kd5nrh@kd5nrh.net
http://www.kd5nrh.net

1248. Re: Reliable source for crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 22:29:36 UTC
From: "Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net>
Message-ID: <B1096BEFFD00A223.8E51D9870EF796C8.976800CF9BFF4AC0@lp.airnews.net>
Source record: 46491

On Sat, 9 Feb 2002 23:03:10 -0500, "xpyttl"
<xpyttl_nospam@earthling.net> wrote:

>I hadn't picked up on that. He said 455 Kc IF like it was single
>conversion. But I can't picture going from 6 meters down to 455 in one
>whack - it just flat wouldn't work, so clearly there is another IF or
>something else going on here.

Possibly; I've been doing all the work on it when I can't sleep, so
it's not like I'm all that conscious for 90% of the time I'm looking
at it.

>That being said, I guess I change my wishy-washy recommendation of ICM.
>Based on your question and the (limited) data you have given, the ONLY way
>you are going to get crystals that work is to call International with the
>make and model of the radio, and the OPERATING frequency you want. I had
>done a back of the envelope that this was going to cost you $400 or so at
>ICM, but $400 for crystals that work is probably better than $200 for
>crystals that don't.

I'm not planning on getting all of them at once, just one pair, (I was
hoping one pair would turn out to be stock values somewhere) and then
maybe more if it works. At any rate, experimentation with 17.1MHz and
18MHz crystals and a dummy load appears to show that the TX side will
work fine all the way to the top of 6m, and I have another 6m FM
receiver here, so even if I can only get the TX side working, it'll be
well worth the $5 purchase price of the talkie and the experience
gained.

Joe Bramblett, KD5NRH
kd5nrh@kd5nrh.net
http://www.kd5nrh.net

1249. Re: WTB: Instruction Sheet For Use With The Cahill-Thomas Sanity Meter, Series JM-14 (Manual)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 22:31:44 UTC
From: Richard Daventry <newsgps_email@ntlworld.com>
Message-ID: <KvC98.36881$H37.4322746@news2-win.server.ntlworld.com>
Source record: 46490

<noone@nowhere.org> wrote in message
news:m3o86u00k6ahf2mve9sg103uacv1siubqp@4ax.com...
> Infinity is a SF poem that I found in the year range '69-'73 in one of
> the anthology books; Best SF of xxxx, or Worlds of IF, or maybe Ben
> Bova's NOVA series. Shoot, I just don't remember, Best SF of xxxx is
> prolly the one, tho.
> The only things that I can remember about it are the title and the
> last 6 words, which are (so ya don't have to ask 8>):
> ". . . and Christ hangs upon another tree."
> I've been haunting second-hand bookstores, libraries, fleamarkets,
> yard sales, and SF meets for at least 20 years hoping to find that
> poem again. Even the author's name would be a help.
> Do you have any clue at all?

Bob

Sorry Bob, I have no idea. I just read to odd bit of SF.

Rich.

1250. Re: Mobile Radio Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 23:49:21 UTC
From: n1ist@panix.com
Message-ID: <a470u1msg1@panix1.panix.com>
Source record: 46492

In article <rgsc6u88ijklrfmj245d8lvne9424tq30m@4ax.com>,
Jim <wdxp@cox.net> wrote:
-I use 20A or 30A Hubbell Twistlock connectors, no way you can get
-it mixed up, huge contact surfaces, available everywhere. THey are a
-bit bulky though (can't get lost easily... he he...)..

Youch! I once saw a piece of equipment that used a 30A twistlock for a 5V buss. Worked real well until the unit was moved to a different location in the plant and the 5V plug was plugged into 110V. Lots of TTL with little holes in it.

If you think this will never happen in a mobile installation, remember the shore power cords that Red Cross and Salvation Army use often have a 30A twistlock on the vehicle end...
/mike

1251. FA: Coax antenna switch 6 into 1 n-connector NR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 23:51:46 UTC
From: FrankB <please@nospam.net>
Message-ID: <3C6707F8.60901@nospam.net>
Source record: 46493

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1332119343

1252. FA: B&W Coil Inductor Barker & Williamson NIB NR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-10 23:53:58 UTC
From: FrankB <please@nospam.net>
Message-ID: <3C67087B.6000302@nospam.net>
Source record: 46494

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1332116591

1253. Re: Reliable source for crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 00:19:11 UTC
From: "Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net>
Message-ID: <4BF613B85CB8CEFF.9CAE7D6BE827F482.D3BECC84C93E81A5@lp.airnews.net>
Source record: 46495

On Sun, 10 Feb 2002 16:23:07 -0600, "Joe Bramblett, KD5NRH"
<kd5nrh@kd5nrh.net> wrote:

>Unless I'm missing something, that comes out to
>TX Freq=3(TX)=49.83MHz
>RX Freq=3(RX+IF)=49.83MHz
>
>Which would make IF=455kHz. Am I missing something?

Aside from my own inability to type equations, that is.

RX Freq=3(RX)+IF)= 49.83MHz

Joe Bramblett, KD5NRH
kd5nrh@kd5nrh.net
http://www.kd5nrh.net

1254. Re: Reliable source for crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 00:52:12 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3C6715BC.E3517D2C@sympatico.ca>
Source record: 46496

I've dealt with Bomar before and was satisfied.
Bill Kirkland
VE3JHU

"Joe Bramblett, KD5NRH" wrote:

> Anybody have a preference on sources for crystals? I'm looking for
> several specific values in the 17-18MHz fundamental range. I prefer
> plug-in crystals and sockets, if that's an issue.
>
> Has anyone done business with http://www.kenselectronics.com ? He
> lists cut-to-order crystals for $8, so if his quality is good, he's
> probably the one I'll buy from.
>
> FWIW, here's the complete list of frequencies that I'd find useful,
> though I need them in pairs (some simplex, some 1MHz offset) suited
> for third overtone use with a 455kHz IF.
>
> 17.34333MHz
> 17.35666MHz
> 17.36166MHz
> 17.50633MHz
> 17.51333MHz
> 17.52500MHz
> 17.53666MHz
> 17.54330MHz
> 17.63167MHz
> 17.64333MHz
> 17.71833MHz
> 17.72833MHz
> 17.75000MHz
> 17.82500MHz
>
> Joe Bramblett, KD5NRH
> kd5nrh@kd5nrh.net
> http://www.kd5nrh.net

1255. Re: Mobile Radio Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 01:27:58 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C671E1E.D2181AFA@eznec.com>
Source record: 46397

A person I once worked for repaired hi-fi systems in his youth. One customer had some very big, expensive speakers. He had put the speaker wiring in the wall, and used regular 110 volt outlets as connectors, with ordinary 110 volt plugs on the short speaker wires. I'm sure you know where this is going. After fixing the hi-fi or speaker, the repairman plugged the speaker back in. He said that the moment he heard the monstrous hum, he knew what had happened. But by the time he got it unplugged, it was too late. Let's see, 115^2/8 = 1653 watts. Loud hum, indeed.

I'm with Mike. It's a terrible idea to use a common connector for anything other that its intended purpose.

Roy Lewallen, W7EL

Michael Ardai wrote:
>
> In article <rgsc6u88ijklrfmj245d8lvne9424tq30m@4ax.com>,
> Jim <wdxp@cox.net> wrote:
> -I use 20A or 30A Hubbell Twistlock connectors, no way you can get
> -it mixed up, huge contact surfaces, available everywhere. THey are a
> -bit bulky though (can't get lost easily... he he...)..
>
> Youch! I once saw a piece of equipment that used a 30A twistlock for
> a 5V buss. Worked real well until the unit was moved to a different
> location in the plant and the 5V plug was plugged into 110V. Lots of
> TTL with little holes in it.
>
> If you think this will never happen in a mobile installation, remember
> the shore power cords that Red Cross and Salvation Army use often have
> a 30A twistlock on the vehicle end...
> /mike

1256. Re: Mobile Radio Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 01:59:31 UTC
From: "John S. MacKay" <k35454@direct.ca>
Message-ID: <u6e9mqfivap8f6@corp.supernews.com>
Source record: 46398

I used to do custom work for the local Parks Board and they had me fit up a
public address amplifier with ordinary 110v fittings for quick connections
to the speakers which was OK because the attendant knew what he was doing.
But somebody OK'd the use of the system for Square Dance night at one of the
tennis courts, so a local Citizens' Committee undertook to transport it and
make a temporary installation. Need I say more ? John M. VE7AFN.
Roy Lewallen <w7el@eznec.com> wrote in message
news:3C671E1E.D2181AFA@eznec.com...
> A person I once worked for repaired hi-fi systems in his youth. One
> customer had some very big, expensive speakers. He had put the speaker
> wiring in the wall, and used regular 110 volt outlets as connectors,
> with ordinary 110 volt plugs on the short speaker wires. I'm sure you
> know where this is going. After fixing the hi-fi or speaker, the
> repairman plugged the speaker back in. He said that the moment he heard
> the monstrous hum, he knew what had happened. But by the time he got it
> unplugged, it was too late. Let's see, 115^2/8 = 1653 watts. Loud hum,
> indeed.
>
> I'm with Mike. It's a terrible idea to use a common connector for
> anything other that its intended purpose.
>
> Roy Lewallen, W7EL
>
> Michael Ardai wrote:
> >
> > In article <rgsc6u88ijklrfmj245d8lvne9424tq30m@4ax.com>,
> > Jim <wdxp@cox.net> wrote:
> > -I use 20A or 30A Hubbell Twistlock connectors, no way you can get
> > -it mixed up, huge contact surfaces, available everywhere. THey are a
> > -bit bulky though (can't get lost easily... he he...)..
> >
> > Youch! I once saw a piece of equipment that used a 30A twistlock for
> > a 5V buss. Worked real well until the unit was moved to a different
> > location in the plant and the 5V plug was plugged into 110V. Lots of
> > TTL with little holes in it.
> >
> > If you think this will never happen in a mobile installation, remember
> > the shore power cords that Red Cross and Salvation Army use often have
> > a 30A twistlock on the vehicle end...
> > /mike

1257. Re: Mobile Radio Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 02:06:13 UTC
From: gdsnkl@bellatlantic.net
Message-ID: <3c672518.42579494@news.bellatlantic.net>
Source record: 46399

On Sun, 10 Feb 2002 17:27:58 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>A person I once worked for repaired hi-fi systems in his youth. One
>customer had some very big, expensive speakers. He had put the speaker
>wiring in the wall, and used regular 110 volt outlets as connectors,
>with ordinary 110 volt plugs on the short speaker wires. I'm sure you
>
>I'm with Mike. It's a terrible idea to use a common connector for
>anything other that its intended purpose.
>
>Roy Lewallen, W7EL
>
>Michael Ardai wrote:
>>
>> If you think this will never happen in a mobile installation, remember
>> the shore power cords that Red Cross and Salvation Army use often have
>> a 30A twistlock on the vehicle end...
>> /mike

I agree, it is risky to use something that is also a standard for
something else. The Hubbell plugs are widely used in industrial
settings for 120, 240, 480V at high amperages, single and 3 phase.
Imagine what could happen with 480V 30A 3 phase to a 12 VDC rig.

The Anderson Powerpoles also have the advantage of being a standard
that many other hams are now using, and there may be advantages in an
emergency to being able to interconnect with the equipment of other
hams responding.

Especially in an emergency, with unfamiliar people working together,
make everything as simple and "user-friendly" i.e. idiot-proof, as
possible.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

1258. Fuse-type light bulb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 02:53:28 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <u6ecg3kumiiuae@corp.supernews.com>
Source record: 46400

I have a piece of equipment with bulbs that look like cylindrical fuses.
They are just under 20 mm long and just under 5 mm in diameter. Both
ends are marked:
RR 12V 1W in small block letters.

I have searched the WEB and the usual catalogs with no success. Does
anyone have a clue as to the proper description or part number?
Thanks.

Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
Office: JCM@McLMcL.Com

1259. Re: Fuse-type light bulb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 03:01:44 UTC
From: -Your Friend Bill- <none@coqui.net>
Message-ID: <3C673418.E908E1A1@coqui.net>
Source record: 46401

"J. McLaughlin" wrote:
>
> I have a piece of equipment with bulbs that look like cylindrical fuses.
> They are just under 20 mm long and just under 5 mm in diameter. Both
> ends are marked:
> RR 12V 1W in small block letters.
>
> I have searched the WEB and the usual catalogs with no success. Does
> anyone have a clue as to the proper description or part number?
> Thanks.
>
> Mac N8TT
>
> --
> J. Mc Laughlin - Michigan USA
> Home: JCM@Power-Net.Net
> Office: JCM@McLMcL.Com

These are common in stereo gear. Search fuse lamps on google or ebay
and you'll find plenty of sources.
-Bill

1260. OT(sort of): Request to older amateurs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 03:25:12 UTC
From: notagain@worldnet.att.net
Message-ID: <sQG98.7519$9%6.1306850@bgtnsc04-news.ops.worldnet.att.net>
Source record: 46402

Can any of you older gentlemen with older versions of the ARRL Handbook find a brute-force 60 Hz Pi filter for use on the output of a 60 Hz inverter power supply? My need is not for amateur radio.
I want to phase synchronize 3 "modified sine wave" (recent) DC to AC inverters to give a Y-connected 3 phase 120 volt output to run a 208 volt Delta connected motor. However, the "modified sine wave" output on these inverters has a high impedance state between the positive and negative pulses that would prohibit proper phase current conduction. The capacitors and inductor in the 3 Pi networks would have to supply the current during the high impedance intervals. (I realize that isolation transformers would be required.)
(E-mail address is invalid to fool spambots)
Any info you can post back to this NG would be appreciated.

TIA

Rick

1261. Building a turntable

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 03:31:03 UTC
From: David A Burroughs <daburr@erols.com>
Message-ID: <a47dktiip1@bob.news.rcn.net>
Source record: 46403

I know this is not strictly radio-related, so I apologize in advance. But I know that people that homebrew ham stuff do a lot of other stuff too.

I am building a homebrew turntable. Most of the work has already been done for me, with an assembly from American Science and Surplus. But the output is too high- I need to attenuate it.

What do I need to buy?

Thanks in advance,
DAB

1262. Re: Reliable source for crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 05:24:49 UTC
From: "Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net>
Message-ID: <5EF919AF321C680B.2CEBB3F33AE1133A.FAE5443B80206D08@lp.airnews.net>
Source record: 46404

On Sun, 10 Feb 2002 18:19:11 -0600, "Joe Bramblett, KD5NRH"
<kd5nrh@kd5nrh.net> wrote:

>RX Freq=3(RX)+IF)= 49.83MHz

Third time's a charm:

RX Freq=3(RX)+IF= 49.83MHz

Joe Bramblett, KD5NRH
kd5nrh@kd5nrh.net
http://www.kd5nrh.net

1263. Re: Fuse-type light bulb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 05:26:50 UTC
From: "Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net>
Message-ID: <D936ADBC0A98CE6A.0DB0BE177281E9E9.5B9F7E81F8179C3A@lp.airnews.net>
Source record: 46405

On Sun, 10 Feb 2002 21:53:28 -0500, "J. McLaughlin"
<JCM@Power-Net.Net> wrote:

>I have a piece of equipment with bulbs that look like cylindrical fuses.
>They are just under 20 mm long and just under 5 mm in diameter. Both
>ends are marked:
> RR 12V 1W in small block letters.

Sounds really similar to the 5W bulbs commonly used in car dome
lights. They might have made something similar in 1W for the dash
instrument lighting.

Joe Bramblett, KD5NRH
kd5nrh@kd5nrh.net
http://www.kd5nrh.net

1264. Re: Building a turntable

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 06:59:37 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <tZJ98.73086$EP1.4897102@bin6.nnrp.aus1.giganews.com>
Source record: 46406

What output is too high? You need to explain what you have and what you are trying to do.

I am thinking perhaps you mean that the signal from the pickup is too loud. That may be because you are using a ceramic or crystal cartridge into the magnetic input of an amplifier. If that's what you are asking, then you simply connect the audio into an AUX input, or change the cartridge for a magnetic one (they are better anyway).

Bob

1265. Re: Fuse-type light bulb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 06:59:39 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <vZJ98.73087$EP1.4896170@bin6.nnrp.aus1.giganews.com>
Source record: 46407

Yes they used to be called festoon type lamps and are common. Check electronics supply houses. They look like 3AG fuses and are the same dimensions but are lamps usually used to illuminate radio dials.

They are available in 6V, 8V, and 12V versions. Make sure you get the right one.

Bob

1266. Re: Building a turntable

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 14:39:05 UTC
From: Mike Gilmour <Mike@n.o.spam.hi-analog.freeserve.co.uk>
Message-ID: <a48l5g$1la$1@news5.svr.pol.co.uk>
Source record: 46408

It's possible that you are using the more sensitive moving coil phono input.Look for a MM (Moving Magnet input). Don't use AUX as advised because this does not have the required RIAA network to contour the cartridge signal.
A moving magnet, ceramic or crystal cartridge may well have a too high output - rather than trying to attenuate and possibly upset the impedance matching it might be worth changing the cartridge for one with less output.
Mike
"Bob" <balbert@cnmnetwork.com> wrote in message news:tZJ98.73086$EP1.4897102@bin6.nnrp.aus1.giganews.com...
> What output is too high? You need to explain what you have and what you are
> trying to do.
>
> I am thinking perhaps you mean that the signal from the pickup is too loud.
> That may be because you are using a ceramic or crystal cartridge into the
> magnetic input of an amplifier. If that's what you are asking, then you
> simply connect the audio into an AUX input, or change the cartridge for a
> magnetic one (they are better anyway).
>
> Bob
>
>

1267. Re: HP Oscillator from an HP5245L counter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 15:46:30 UTC
From: Tracy <thooker@psl.nmsu.edu>
Message-ID: <a48p2h$k2i$1@bubba.NMSU.Edu>
Source record: 46409
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Norm,

That explains a lot! The oscillator has the 10544 part number, with
a -60036 after it. It definitely puts out 1 MHz. I took the A26 card out
and began tracing it, and sure enough, there is a section that looks like a
buffer, but no multiplier. I took the A27 out, and it has 6 variable
inductors along the top, and three transistors. The multiplier?

So, two things that would really help:

A schematic / pinout of the A26 card

A schematic / pinout of the A27 card

Any info you could forward would greatly assist me. Maybe I should just
find a counter with an actual 10 MHz oscillator in it!

Cheers,

Tracy

KA5ECS

"Norm Mann" <folder0735@hotmail.com> wrote in message
news:3c66ac1d$0$188@news.impulse.net...
>
> "Tracy" <thooker@psl.nmsu.edu> wrote in message
> news:a417fu$5u0$1@bubba.NMSU.Edu...
> > Hi all,
> > I took the 10544 oscillator out of an HP5245L counter. I also got the
> small
> > plug in card that was next to it, which seemed to be hooked up to the
> > 'timebase output' switch on the rear of the counter. The switch allows
a
> > user to select one of several outputs (10, 1, .1, etc MHz). I think the
> > oscillator itself only puts out 1.000000 Mhz (at something like -20
dBm),
> so
> > the card must have some multiplier and buffer stages in order to get 10
> MHz.
> >
> > Anybody have a schematic of this little plug in card? I would like to
use
> > the oscillator and the card in a small high accuracy frequency standard
> for
> > my bench.

>
> Which "little plug in card"? The "original" HP5245L had a crystal oven
with
> a "little plug in card" next to it in the A26 slot. This card had two
> circuits, the osc/agc loop and a "trigger" (looks like a distribution
> amplifier?) Both of these circuits worked at 1 MHz. The next "little
plug
> in card" over (in the A27 slot) was the x10 multiplier.
> Since you appear to have a modified version, with an oscillator instead of
a
> crystal oven, I'd be guessing that the A26 card was left in place, using
the
> osc. circuit as a buffer amp. The output of the A26 osc/agc loop went to
a
> contact on the "mode" switch. The common of the "mode" switch was
connected
> to the "trigger" amp input on the A26 card.
> I doubt that my old schematic would match your card, but the pinout info
and
> voltages may be useful. Would these be enough help?
>
> -CB
>
>
>
>

1268. Re: Building a turntable

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 16:37:14 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <_qS98.76353$6o2.5465116@bin4.nnrp.aus1.giganews.com>
Source record: 46410

A ceramic or crystal cartridge does NOT require RIAA equalizaion; it's built into the characteristics of the element. Well, actually it's not but it does have roughly the required response. Moving magnet and moving coil (lumped as magnetic) do require this, as well as lots more gain than ceramic or crystal.

So the appropriate input for crystal or ceramic is AUX. And for magnetic, is PHONO.

Bob

1269. Re: Reliable source for crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 17:34:18 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0202110934.745ca1b2@posting.google.com>
Source record: 46411

"Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net> wrote in message
news:<F798C9D66C1AA72F.B05E255DDF8CDCBF.2D39554C42B168D9@lp.airnews.net>...
> On 9 Feb 2002 19:24:43 -0800, blackm00@cam.org (Michael Black) wrote:
>
> >But what are these for? They can be for the conversion of a 49MHz
> >walkie talkie, like you asked about in another thread, because they
> >have 10.7Mhz first IFs.
>
> How do you figure? I'm looking at the innards of my TRC-509 right
> now, and the crystals here are 16.610MHz (TX) and 16.45833MHz. (RX)
>
> Unless I'm missing something, that comes out to
> TX Freq=3(TX)=49.83MHz
> RX Freq=3(RX+IF)=49.83MHz
>
> Which would make IF=455kHz. Am I missing something?
>
>
> Joe Bramblett, KD5NRH
> kd5nrh@kd5nrh.net
> http://www.kd5nrh.net

It's not your math. The 49MHz walkie talkies that I've looked at,
the TRC-504 and the TRC-501, are dual conversion. There's a third
crystal and they use one of those Motorola MC3357 IF strips that's
designed to convert 10.7MHz down to 455KHz. I've yet to see a post
about those walkie talkies where someone mentioned only a 455KHz IF.

If that's the crystal you're reading (and there's also no 10.240MHz
crystal in there too), then you must have a single conversion unit.
I wonder what the story on that is, was it a cheaper model, was it
an early model that didn't work too well, or did they decide with
time that they could get by with a cheaper design?

This is not as appealing a unit as the dual conversion ones. One
of the interesting things about the dual conversion units was that
apart from the low power, they couldn't have been particularly different
from a lot of two way equipment. A single conversion to 455Khz makes
it more like a toy.

Having looked at 49Mhz cordless phones, I had assumed they all were
dual conversion, and I keep suggesting them as a source of FM IF
strips. But one time Mark Zenier mentioned that some he'd seen
were single conversion, going straight to 455Khz. Later, I picked
one up at a garage sale that used that very scheme. If I recall,

though, it used one of those Motorola IF ICs in the range of the MC3357, but used the converter intended to go from 10.7Mhz to 455KHz as the first mixer, going from 49Mhz straight down to 455KHz.

I've always thought the receiver in these units had the most potential, because with a change of crystal you had a decent dual conversion receiver (or, use it with a converter for a higher band, or bypass the front end so you have a 10.7Mhz IF strip to be used with an external front end or some receiver that outputs that frequency). If it's not dual conversion, it's not nearly as appealing. The transmitter isn't all that special, and by the time you add an amplifier, one might as well start from the crystal up.

You could try putting the transmit crystal in the receive socket. That will get you reception in the 6meter band, though maybe not high enough for this sort of use.

Michael VE2BVW

1270. receiver front end noise question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 19:02:01 UTC
From: hexter@blazenet.net
Message-ID: <u6g599ik30a363@corp.supernews.com>
Source record: 46412

I am trying to make a microwave receiver more sensitive, and I have
run into a noise floor problem. Here is the layout,

X-band waveguide input directly into a mixer consisting of
a 1N23E, and a 1N23ER balanced mixer setup. Local osc is divided
to drive the balanced mixer pair, and the drive is about 0dbm.

The noise figure of the diodes is stated as being 8 Db, and they
are driving about 300 ohms resistive load per each.

Question 1, For a SNR of 10 Db looking at the load resistors, what
is the minimum detectable input signal to the waveguide? Use 8 mhz
as the bandwidth of interest if that is important to the calculation.
The I.F. freq is 60 mhz.

Is it possible to get 10 Db SNR from an input signal as low
as -115 Dbm at the waveguide input flange, or is the noise floor
substantialy above that level?

Question 2. The diodes are driving a 2SC1855 transistor used as
an impedance converter and gain stage. Do you feel that this particular
transistor is to noisey for the job at hand?

I ask these questions relative to AM modulated ATV. I have about
60 Db of I.F. gain driving an ECG 1187 as my video detector/amp.

I tried adding 20 Db of I.F. gain, and it did not help the receiver
input sensitivity at all! The only thing I got was 20 Db higher noise
output.

Question 3. Would it make better sense to give up on I.F. gain, and
start working on microwave gain prior to the mixers?

Thank you kindly for any help or suggestions, 73

(WN3SOH,WB3BIO,KD3SH)

A.K.A. Bink

1271. Re: Building a turntable

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 19:39:41 UTC
From: Mike Gilmour <Mike@n.o.spam.hi-analog.freeserve.co.uk>
Message-ID: <a496p6eid1@news5.svr.pol.co.uk>
Source record: 46413

As we do not know what type of cartridge David has yet I was merely avoiding
further problems if he did happen to have a moving coil or moving magnet
cartridge on aux. Quite a number of upmarket moving coil cartridges have
exceedingly low ouput far less than either ceramic or Xtal but this is
splitting hairs - I would guesss we both need information regarding
cartridge type/output plus the amplification David is using.

Mike
"Bob" <balbert@cnmnetwork.com> wrote in message
news:_qS98.76353$6o2.5465116@bin4.nnrp.aus1.giganews.com...
> A ceramic or crystal cartridge does NOT require RIAA equalizaion; it's
built
> into the characteristics of the element. Well, actually it's not but it
> does have roughly the required response. Moving magnet and moving coil
> (lumped as magnetic) do require this, as well as lots more gain than
ceramic
> or crystal.
>
> So the appropriate input for crystal or ceramic is AUX. And for magnetic,
> is PHONO.
>
> Bob
>
>

1272. Re: HP Oscillator from an HP5245L counter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 21:13:12 UTC
From: Rex <notreally@hotmail.com>
Message-ID: <hebg6usvuj9qlruk6geevhtkuv56024krg@4ax.com>
Source record: 46414
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Mon, 11 Feb 2002 08:46:30 -0700, "Tracy" <thooker@psl.nmsu.edu>
wrote:

>Norm,
>
>That explains a lot! The oscillator has the 10544 part number, with
>a -60036 after it. It definitely puts out 1 MHz. I took the A26 card out
>and began tracing it, and sure enough, there is a section that looks like a
>buffer, but no multiplier. I took the A27 out, and it has 6 variable
>inductors along the top, and three transistors. The multiplier?
>
>
>
>So, two things that would really help:
>
>A schematic / pinout of the A26 card
>
>A schematic / pinout of the A27 card
>
>
>
>Any info you could forward would greatly assist me. Maybe I should just
>find a counter with an actual 10 MHz oscillator in it!

Tracy,

I sent you an email with a picture of a 10544 and the block diagram
of the 5245. That answers your questions about the functions of A26
and A27. In my email (copied below) I describe the same physical
layout of A27, and that it is the multiplier. Why are you still
confused??

You received a reply from Rick Karlquist that also seemed surprised
that the 10544 could have a 1 MHz output. He is one of the best
informed people you could find. He designed a lot of HP's best
sources and counters. Does the 10544 look like the picture I sent?

Since it was driving the A27 card which multiplies 1 MHz to 10 Mhz,
I guess you do have a strange version that somehow outputs 1 MHz.

What is your final goal? Look at the block diagram and decide how
much you care about. Is the multiplier all you need? I'm thinking
that anything from a26 (1 MHz buffer to the divider) through the
divider chain might be easier by homebrewing with modern chips than
using the very old 5245 discrete design.

quoted email:
>>I'm sending two files. First is a picture of the 10544 which
>>I've only heard of as being a 10 MHz osc. The crystal oven
>>portion of my 5245 is a cylinder about two inches in dia.
>>If yours has a 1 MHz output, then the rest might be standard
>>5245 stuff. The 2nd file is a scan of the block diagram from
>>the service manual. You can see if it looks similar.

>>The 10 MHz multiplier (A27) is a small board with 6 coils and
>>3 transistors. A35 is a long thin board. The divide-by-10 blocks
>>are each implemented on a board with about 7 discrete transistors.

>>Don't know if any of this matches yours but this is what's in
>>my old 60's version.

>>-Rex, KK6MK

-Rex
[rexa -TheAtSign- Next4dnaiLetters -period- (UsualComEnd)]< my_eemale_addy

1273. Re: MRF138 - What are They Worth?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 21:13:12 UTC
From: cydw@optsource.com
Message-ID: <7bf84faa.0202111313.5d9210bd@posting.google.com>
Source record: 46415
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.misc,sci.electronics.design

melissaNo0oOSPAM@dimensional.com (Melissa Liberty - Colorado) wrote in message news:<3c642caf_2@omega.dimensional.com>...
> cydw@optsource.com (Cyd Weeks) bestowed such eternal wisdom upon us by
> saying from <7bf84faa.0202080915.7edb7300@posting.google.com>:
>
> >melissaNo0oOSPAM@dimensional.com (Melissa Liberty - Colorado) wrote in
> >message news:<3c635618_2@omega.dimensional.com>...
> >> BTW, I did find my old Motorola data book with the sheets in it for
> >> this.
> >>
> >> I thought I also had some typical circuits for it somewhere but haven't
> >> found those yet. Seems pretty simple for a RF designer/ham though.
> > >
> > >
> > >Just so you know... I was just quoted $125.00 each for 18 pcs.
> > >You have an expensive little part on your hands. :o)
>
> Whoa! From who?

From a company in the UK that deals in the parts. I am also sure, that if you call RF, you will get quoted in at least the $70.00 something range. A smart ham may be able to avoid paying those prices, and you may be willing to share them with someone, which is a beautiful thing, but, if you are interested in keeping a couple and marketing the others, call a couple of places (those rip off ones, lol) and see if they will take them for a nice price. There happen to be oems out there that aren't interested in "figuring out a different cheaper way"...they just want a part that is already approved that will do the job.

>
> --
> - Melissa Liberty
> Somewhere in Colorado
>
> "...I am opposed to all attempts to license or restrict the arming of
> individuals...I consider such laws a violation of civil liberty,
> subversive of democratic political institutions, and self-defeating
> in their purpose." - Robert Heinlein, in a 1949 letter concerning "Red
> Planet"

1274. Re: receiver front end noise question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 22:29:39 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <je9g6uglppcuoatp47i3lftve2b1v53jhj@4ax.com>
Source record: 46416

On Mon, 11 Feb 2002 19:02:01 -0000, hexter@blazenet.net (gudmundur) wrote:

>Question 1, For a SNR of 10 Db looking at the load resistors, what
>is the minimum detectable input signal to the waveguide? Use 8 mhz
>as the bandwidth of interest if that is important to the calculation.
>The I.F. freq is 60 mhz.

The diode mixer loss must be added to the IF noise figure (assuming 3 dB), so the receiver input noise figure would be 11 dB in the most optimistic case :-).

The 3dB IF noise figure corresponds to about 300K noise temperature or -174 dBm/Hz noise density. The equivalent mixer input noise density would be -166 dBm/Hz, thus with 8 MHz bandwidth, the total noise power would be -97 dBm. For a 10 dB SNR, the signal would have to be -87 dBm.

>Question 3. Would it make better sense to give up on I.F. gain, and
>start working on microwave gain prior to the mixers?

Yes definitely. The noise temperature for a horizontally looking antenna at 10 GHz is about 150 - 200 K, so a receiver noise figure of 1-2 dB is still usable. Take a look at some 10-11 GHz satellite tuner heads with plenty of gain before the mixer.

Paul OH3LWR

1275. Re: Reliable source for crystals?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 22:33:01 UTC
From: "Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net>
Message-ID: <90F327C29CE16B43.002DCE514020577F.6B7D15BABF9EF80B@lp.airnews.net>
Source record: 46417

On 11 Feb 2002 09:34:18 -0800, blackm00@cam.org (Michael Black) wrote:

>If that's the crystal you're reading (and there's also no 10.240MHz
>crystal in there too),

None that I can find, and it's not much are to search. I thought I might have missed one of the small-can crystals, butnothing else here even looks like a crystal. At some point, I'll try to stuff it in the scanner and put a pic on my website.

> then you must have a single conversion unit.
>I wonder what the story on that is, was it a cheaper model, was it
>an early model that didn't work too well, or did they decide with
>time that they could get by with a cheaper design?

Probably all of the above; IIRC, the price before clearance was around $20, and it is a Radio Shack product.

>This is not as appealing a unit as the dual conversion ones. One
>of the interesting things about the dual conversion units was that
>apart from the low power, they couldn't have been particularly different
>from a lot of two way equipment. A single conversion to 455Khz makes
>it more like a toy.

And just what are any of our radios, if not toys? ;)

>If it's not dual conversion, it's not nearly as appealing. The
>transmitter isn't all that special, and by the time you add an
>amplifier, one might as well start from the crystal up.

Ah, but half the fun will be figuring a way to get all that back into the original case, even if I have to change it to an external battery. Then I'll have a $5 toy radio that can use the local 6m repeater...assuming it even still exists; three days of scanning, and I haven't heard a peep from it. Selectivity in the receiver isn't terribly vital, as the entire 6m band here seems to be pretty dead. As long as I'm not getting channel 2 in it, it should be good enough.

Then again, channel 2 around here is pretty cool, so that might be even better than a $5 HT :)

Joe Bramblett, KD5NRH
kd5nrh@kd5nrh.net
http://www.kd5nrh.net

1276. Re: Delta hetrodye

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-11 23:53:23 UTC
From: Peter Goodwin <pgood@xtra.co.nz>
Message-ID: <VMY98.10361$Lv.1270109@news.xtra.co.nz>
Source record: 46418

If you want more information on the 'Deltahet' it just might be possible to get it through silicon chip magazine in Australia. Apparently they have purchased the archives of the now defunct 'Electronics Australia' (formerly called Radio, Television, and Hobbies).

"Peter Parker" <parkerp@alphalink.com.au> wrote in message news:3c6834fb@news.alphalink.com.au...
>
> "Michael Black" <blackm00@cam.org> wrote in message
> > My 1978 edition of "Amateur Radio Techniques" (a compendium of material
> > from the Technical Topics column in the RSGB's Radio Communication)
> > mentions a "Deltahet" by VK2AZN in "Radio, Television and Hobbies",
> > though no date of the original article is given.
>
> The first version was a valve version. The later one was solid state
> (around early 70s).
> The valve set would have been around the mid-60s.
>
> I think more people had better luck with the valve one than the solid
state
> version.
>
> Peter
>
>

1277. Re: Fuse-type light bulb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 00:02:36 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <u6gmt6g5kqps12@corp.supernews.com>
Source record: 46419

how old is the eqpt?
"-Your Friend Bill-" <none@coqui.net> wrote in message
news:3C673418.E908E1A1@coqui.net...
> "J. McLaughlin" wrote:
> >
> > I have a piece of equipment with bulbs that look like cylindrical fuses.
> > They are just under 20 mm long and just under 5 mm in diameter. Both
> > ends are marked:
> > RR 12V 1W in small block letters.
> >
> > I have searched the WEB and the usual catalogs with no success. Does
> > anyone have a clue as to the proper description or part number?
> > Thanks.
> >
> > Mac N8TT
> >
> > --
> > J. Mc Laughlin - Michigan USA
> > Home: JCM@Power-Net.Net
> > Office: JCM@McLMcL.Com
>
> These are common in stereo gear. Search fuse lamps on google or ebay
> and you'll find plenty of sources.
> -Bill
>

1278. 100kHz to 22.5kHz conversion - will it have jitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 00:29:18 UTC
From: la8ak.xnd@online.no
Message-ID: <3c6838d3.15421192@news.online.no>
Source record: 46420

Looking into design of DCF77.5kHz receiver.
Suppose (100/4) - (100/4)/10 = 22.5kHz,
divide 100kHz (divider chain from 10MHz) to 25kHz and mix with 2.5kHz
to give 22.5kHz. A NAND-gate seem to be a solution, but will give 2
pulses for every 10 in, so I suppose it will jitter.
another suggestion is to use analogue mixer with tuned circuits for 25
and 2.5kHz feeding the mixer

Is the ideas bad?

Need 22.5kHz to mix 77.5kHz to 100kHz, feed it through an xtal filter
and to the phase detector which is operated on the highest possible
frequency

73
LA8AK
--
remove ,xnd to reply

1279. Re: Applying ext. ALC to IC-735, pse help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 00:29:18 UTC
From: la8ak.xnd@online.no
Message-ID: <3c6858ad.23576564@news.online.no>
Source record: 46421
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

On Mon, 11 Feb 2002 19:44:09 GMT, James Skalski
<jskalski@bellatlantic.net> wrote:

>Richard J wrote:
>
>> Hi group - I know the IC-735 may not exactly qualify as a BA - yet - but unless I fix this issue, this particular rig certainly will be a candidate.....
>>
>> I need to know the ALC voltages necessary to bring down the output of the TRANSVERTER jack,
>in order to drive a transverter with a lot less power than the stated "30mV" -
>whatever that measure came from (user manual). I plan to do this thru the ACC 2 jack, pins 2(GND) and 5(-V).
>>
>> 2 questions arise:
>>
>> a) does ALC limiting affect the transverter output at all, or does it just shut down the output stage of the rig more or less?
>>
>> b) I *guess* from past experiences that we talk about applying a negative voltage in the order of 0V-- -4V or so. I need to get this verified, and also need some kind of table where ALC voltages and the corresponding power reductions are shown. I need to prepare this ALC supply as best I can without having the rig here, and it has to work at first try (long trip to rig, no tools/components etc on site)
>>
>> maybe c) I also guess we are talking small voltage increments for drastic changes in output, 0.1V increments or less? Time to chase a 20-turn pot, but what value, and what power source (internal 13.8V may or may not be good candidate, you tell me?)
>>
>> Anyone with precise knowledge (or any other useful info) abt this issue would be a welcome guest on my screen.
>>
>> Cheers from Sweden /73 Rick, SM7SCJ, somewhat technically challenged
>>
>
>Hello,
>The ALC might not control a stage that far back. Did you consider using
>a small attenuator. Once you choose the db of attenuation needed place
>it in line with the xvtr transmit output. The receive runs on a separate
>line if I remember correctly.
> Jim (n2go)
>
the ALC type usually found with HF transceivers is feedback from power

amplifier to reduce gain if power amplifier is overloaded, so the transceiver operates with full gain (in such case - too much) and the feedback is actuated every time you speak too loud

Would suppose the ALC or ADC you request is another, which I would not recommend, but DJ9BV described some modifications to reduce power with transverter for his transceiver.

For my FT-7 I simply "bypassed" the 10W power amplifier, and the circuit was simplified to disable the 10W stage and take the signal from the pre-driver, which was 10mW in FT-7, believe it is 1W for FT-7B. For FT-902 and FT-101 signal is taken from PA grid circuit and PA valves are switched off (heater off)
See Kenwood TS-850 modifications for use with transverter DJ9BV DUBUS 92-2-pp30....

Much more efficient is to post such requests to rec.radio.amateur.homebrew

73
LA8AK
--
remove ,xnd to reply

1280. Re: OT(sort of): Request to older amateurs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 01:50:22 UTC
From: w4pqwhs@aol.com
Message-ID: <20020211205022.21696.00000791@mb-mp.aol.com>
Source record: 46422

>04-news.ops.worldnet.att.net>
>
>Can any of you older gentlemen with older versions of the ARRL Handbook find
>a
>brute-force 60 Hz Pi filter for use on the output of a 60 Hz inverter power
>supply? My need is not for amateur radio.
> I want to phase synchronize 3 "modified sine wave" (recent) DC to AC
>inverters to give a Y-connected 3 phase 120 volt output to run a 208 volt

Rick,I cannot add much on locating the 60 hz filter but I have had some experience running 3 ph motors on single phase lines..take 120 volt line ,connect three wires to the high side ,run line 1 thru a capacitor bank to motor L1,run line 2 direct to motor L2, run line 3 through a choke to motor L3 . Common ac line to center of Y connection... causes one line to lead one line to lag..that will run the motor at about any power you might need, the value of Ind and cap will determine what size motor that can be operated.. To synchronize three individual inverters to give 3 phase output at 120 degrees apart and locked together ,,, may be possible but it is over my head (away over)...good luck.. Harold W4PQW

1281. Re: receiver front end noise question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 02:28:19 UTC
From: Dan Tayloe <dtayloe@home.com>
Message-ID: <3C687DC3.2A58D957@home.com>
Source record: 46423

Given the 8 db loss of the input diode mixer stage, the sensitivity of your setup will depend upon the noise figure of the post mixer amplifying stage. Likely it should be 1 db NF or better if you are trying to get a noise figure of 10 db or better overall.

Noise from a 50 ohm resistor in nV is about 1.3*SQRT(R)*SQRT(BW), so your 50 ohm system noise in a 8 MHz bandwidth would be: 1.3*SQRT(50)*SQRT(8000000) or 2600 nV or 2.6 uV. Assuming a 10 db noise figure receiver, the 3 db S+N/N would be 10**(10/20) * 2.6 uV or 8.22 uV.

You would expect 3 db S+N/N with a 8.22 uV signal if you have a 10 db NF receiver with a receiver bandwidth of 8 MHz.

- Dan Tayloe, N7VE; Phoenix, Az; Az ScQRPions

gudmundur wrote:
>
> I am trying to make a microwave receiver more sensitive, and I have
> run into a noise floor problem. Here is the layout,
>
> X-band waveguide input directly into a mixer consisting of
> a 1N23E, and a 1N23ER balanced mixer setup. Local osc is divided
> to drive the balanced mixer pair, and the drive is about 0dbm.
>
> The noise figure of the diodes is stated as being 8 Db, and they
> are driving about 300 ohms resistive load per each.
>
> Question 1, For a SNR of 10 Db looking at the load resistors, what
> is the minimum detectable input signal to the waveguide? Use 8 mhz
> as the bandwidth of interest if that is important to the calculation.
> The I.F. freq is 60 mhz.
>
> Is it possible to get 10 Db SNR from an input signal as low
> as -115 Dbm at the waveguide input flange, or is the noise floor
> substantialy above that level?
>
> Question 2. The diodes are driving a 2SC1855 transistor used as
> an impedance converter and gain stage. Do you feel that this particular
> transistor is to noisey for the job at hand?
>
> I ask these questions relative to AM modulated ATV. I have about
> 60 Db of I.F. gain driving an ECG 1187 as my video detector/amp.
>
> I tried adding 20 Db of I.F. gain, and it did not help the receiver

> input sensitivity at all! The only thing I got was 20 Db higher noise
> output.
>
> Question 3. Would it make better sense to give up on I.F. gain, and
> start working on microwave gain prior to the mixers?
>
> Thank you kindly for any help or suggestions, 73
>
> (WN3SOH,WB3BIO,KD3SH)
>
> A.K.A. Bink

1282. Re: 100kHz to 22.5kHz conversion - will it have jitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 02:35:10 UTC
From: Dan Tayloe <dtayloe@home.com>
Message-ID: <3C687F5A.DF58FF7F@home.com>
Source record: 46424

In my experience, a NAND gate mixer is only good to get the difference.
A better mixer is a XOR (7486) gate. However, digital mixing has never
worked very well for me due to the extremely high level, very high order
mixing product. Lots of birdies from high order mixing products!

- Dan Tayloe, N7VE; Phoenix, Az, Az ScQRPions

J M Noeding wrote:
>
> Looking into design of DCF77.5kHz receiver.
> Suppose (100/4) - (100/4)/10 = 22.5kHz,
> divide 100kHz (divider chain from 10MHz) to 25kHz and mix with 2.5kHz
> to give 22.5kHz. A NAND-gate seem to be a solution, but will give 2
> pulses for every 10 in, so I suppose it will jitter.
> another suggestion is to use analogue mixer with tuned circuits for 25
> and 2.5kHz feeding the mixer
>
> Is the ideas bad?
>
> Need 22.5kHz to mix 77.5kHz to 100kHz, feed it through an xtal filter
> and to the phase detector which is operated on the highest possible
> frequency
>
> 73
> LA8AK
> --
> remove ,xnd to reply

1283. Re: receiver front end noise question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 02:36:07 UTC
From: Dan Tayloe <dtayloe@home.com>
Message-ID: <3C687F96.642D787A@home.com>
Source record: 46425

Yep. Same answer two different ways. 8.22 uV @50 ohm = -87 dbm.

- Dan Tayloe, N7VE

Paul Keinanen wrote:
>
> On Mon, 11 Feb 2002 19:02:01 -0000, hexter@blazenet.net (gudmundur)
> wrote:
>
> >Question 1, For a SNR of 10 Db looking at the load resistors, what
> >is the minimum detectable input signal to the waveguide? Use 8 mhz
> >as the bandwidth of interest if that is important to the calculation.
> >The I.F. freq is 60 mhz.
>
> The diode mixer loss must be added to the IF noise figure (assuming 3
> dB), so the receiver input noise figure would be 11 dB in the most
> optimistic case :-).
>
> The 3dB IF noise figure corresponds to about 300K noise temperature or
> -174 dBm/Hz noise density. The equivalent mixer input noise density
> would be -166 dBm/Hz, thus with 8 MHz bandwidth, the total noise power
> would be -97 dBm. For a 10 dB SNR, the signal would have to be -87
> dBm.
>
>
> >Question 3. Would it make better sense to give up on I.F. gain, and
> >start working on microwave gain prior to the mixers?
>
> Yes definitely. The noise temperature for a horizontally looking
> antenna at 10 GHz is about 150 - 200 K, so a receiver noise figure of
> 1-2 dB is still usable. Take a look at some 10-11 GHz satellite tuner
> heads with plenty of gain before the mixer.
>
> Paul OH3LWR

1284. Re: Fuse-type light bulb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 03:55:19 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <u6h4g5d0hd3h1a@corp.supernews.com>
Source record: 46426

Dear Mr. Kolesnik:
The equipment is one year old and must have been designed within the
past 5 years, or so.
It was probably designed in Italy.
Does this help? 73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
Office: JCM@McLMcL.Com
"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:u6gmt6g5kqps12@corp.supernews.com...
> how old is the eqpt?
> "-Your Friend Bill-" <none@coqui.net> wrote in message
> news:3C673418.E908E1A1@coqui.net...
> > "J. McLaughlin" wrote:
> > >
> > > I have a piece of equipment with bulbs that look like cylindrical
fuses.
> > > They are just under 20 mm long and just under 5 mm in diameter.
Both
> > > ends are marked:
> > > RR 12V 1W in small block letters.
> > >
> > > I have searched the WEB and the usual catalogs with no success.
Does
> > > anyone have a clue as to the proper description or part number?
> > > Thanks.
> > >
> > > Mac N8TT
> > >
> > > --
> > > J. Mc Laughlin - Michigan USA
> > > Home: JCM@Power-Net.Net
> > > Office: JCM@McLMcL.Com
> >
> > These are common in stereo gear. Search fuse lamps on google or
ebay
> > and you'll find plenty of sources.
> > -Bill
> >
>
>

1285. Re: Fuse-type light bulb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 03:58:04 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <u6h4l73155g850@corp.supernews.com>
Source record: 46427

Dear Bill: Thanks. I have not used the combination you suggested
when making google searches. I think of a lamp as being the fixture
that uses a bulb.
Thanks for the suggestion. 73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
Office: JCM@McLMcL.Com
"-Your Friend Bill-" <none@coqui.net> wrote in message
news:3C673418.E908E1A1@coqui.net...
> "J. McLaughlin" wrote:
> >
> > I have a piece of equipment with bulbs that look like cylindrical
fuses.
> > They are just under 20 mm long and just under 5 mm in diameter.
Both
> > ends are marked:
> > RR 12V 1W in small block letters.
> >
> > I have searched the WEB and the usual catalogs with no success.
Does
> > anyone have a clue as to the proper description or part number?
> > Thanks.
> >
> > Mac N8TT
> >
> > --
> > J. Mc Laughlin - Michigan USA
> > Home: JCM@Power-Net.Net
> > Office: JCM@McLMcL.Com
>
> These are common in stereo gear. Search fuse lamps on google or ebay
> and you'll find plenty of sources.
> -Bill
>

1286. Re: Fuse-type light bulb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 03:59:59 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <u6h4p3regt8o6a@corp.supernews.com>
Source record: 46428

Dear Mr. Bramblett:
I do not think that these are the same. Too small and too metric.
Thanks for the help. 73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
Office: JCM@McLMcL.Com
"Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net> wrote in message
news:D936ADBC0A98CE6A.0DB0BE177281E9E9.5B9F7E81F8179C3A@lp.airnews.net..
.
> On Sun, 10 Feb 2002 21:53:28 -0500, "J. McLaughlin"
> <JCM@Power-Net.Net> wrote:
>
> >I have a piece of equipment with bulbs that look like cylindrical
fuses.
> >They are just under 20 mm long and just under 5 mm in diameter. Both
> >ends are marked:
> > RR 12V 1W in small block letters.
>
> Sounds really similar to the 5W bulbs commonly used in car dome
> lights. They might have made something similar in 1W for the dash
> instrument lighting.
>
>
> Joe Bramblett, KD5NRH
> kd5nrh@kd5nrh.net
> http://www.kd5nrh.net

1287. Re: Fuse-type light bulb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 04:08:19 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <u6h58m557k07e9@corp.supernews.com>
Source record: 46430

Dear Bob:
The light bulbs that are the same size as a 3AG (third, automotive, glass) are 1.25 inches long. The ones I am looking for are 20 mm long and are of the same size as a (metric) 5x20mm fuse. Another list member suggested a place that has the 3AG size bulbs, and I might have to modify the bulb holder so as to be able to use 3AG size bulbs. I found one reference that suggested that either the 5x20mm fuses, or the bulbs of the same size, are "T-size."

The reference to "festoon" is a new lead. Thanks!

73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
Office: JCM@McLMcL.Com
"Bob" <balbert@cnmnetwork.com> wrote in message
news:vZJ98.73087$EP1.4896170@bin6.nnrp.aus1.giganews.com...
> Yes they used to be called festoon type lamps and are common. Check
> electronics supply houses. They look like 3AG fuses and are the same
> dimensions but are lamps usually used to illuminate radio dials.
>
> They are available in 6V, 8V, and 12V versions. Make sure you get the
right
> one.
>
> Bob
>
>

1288. Re: receiver front end noise question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 04:09:06 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C689531.39C2@pop.removethistomailme.net>
Source record: 46431

Dan Tayloe wrote:
>
> Yep. Same answer two different ways. 8.22 uV @50 ohm = -87 dbm.

For what it's worth, that's roughly the same MDS I observed at the input of a 40 MHz-wide IF with NF=2 dB (two Mini-Circuits MAR-6s at 145 MHz). In my tests, at least -85 dBm at the input of the IF strip was needed for recovery of 10-Mbit/second FSK, which would correspond to about -93 dBm to -95 dBm at the antenna flange.

I don't remember the conversion-loss figure for the single-ended Schottky mixer diode in my Gunnplexers, but 8-10 dB sounds about right.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1289. Re: Fuse-type light bulb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 04:09:11 UTC
From: -Your Friend Bill- <none@coqui.net>
Message-ID: <3C689567.F654F23A@coqui.net>
Source record: 46429

"J. McLaughlin" wrote:
>
> Dear Bill: Thanks. I have not used the combination you suggested
> when making google searches. I think of a lamp as being the fixture
> that uses a bulb.
> Thanks for the suggestion. 73 Mac N8TT

That simply seems to be the name they go by since they resemble a fuse
and the term lamp seems to be more common than bulb these days for
smaller type things that light up. Hence the name fuse lamp.
You triggered my memory that I needed some and I ordered them today.
8/$10 for a Sansui stereo receiver. I got mine from
http://www.vintage-electronics.net/

-Bill

1290. Re: OT(sort of): Request to older amateurs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 05:20:52 UTC
From: "mkelly@powerup.com.au" <mkelly@powerup.com.au>
Message-ID: <3C68A634.FEE78E5F@powerup.com.au>
Source record: 46432

Woulkd it be possible to run all 3 inverters off a single
frequency source? That way you could divide down some higher
driving frequency so that the inverters were exactly 120 deg
apart. Yes/no?

Cheers.
Murray vk4aok

notagain@worldnet.att.net wrote:
>
> Can any of you older gentlemen with older versions of the ARRL Handbook find a
> brute-force 60 Hz Pi filter for use on the output of a 60 Hz inverter power
> supply? My need is not for amateur radio.
> I want to phase synchronize 3 "modified sine wave" (recent) DC to AC
> inverters to give a Y-connected 3 phase 120 volt output to run a 208 volt
> Delta connected motor. However, the "modified sine wave" output on these
> inverters has a high impedance state between the positive and negative pulses
> that would prohibit proper phase current conduction. The capacitors and
> inductor in the 3 Pi networks would have to supply the current during the
> high impedance intervals. (I realize that isolation transformers would be
> required.)
> (E-mail address is invalid to fool spambots)
> Any info you can post back to this NG would be appreciated.
>
> TIA
>
> Rick

--
****
* Murray Kelly vk4aok mailto://mkelly@powerup.com.au *
* 29 Molonga Ter. / Graceville/ QLD. 4075/ Australia *
* ph/fax Intl+ 61 7 3379 3307 *
****

1291. BUZ45 Datasheet?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 05:33:31 UTC
From: ianburn <ianburn@shaw.ca>
Message-ID: <LO1a8.15098$A44.934747@news2.calgary.shaw.ca>
Source record: 46437

Can anyone point me to a source of a BUZ45 power mosfet data sheet?

Thanks
Ian, VE6OB

1292. Re: OT(sort of): Request to older amateurs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 06:44:18 UTC
From: notagain@worldnet.att.net
Message-ID: <6R2a8.7892$421.678893@bgtnsc05-news.ops.worldnet.att.net>
Source record: 46433

In article <20020211205022.21696.00000791@mb-mp.aol.com>, w4pqwhs@aol.com (W4pqw HS) wrote:

>Rick,I cannot add much on locating the 60 hz filter but I have had some
>experience running 3 ph motors on single phase lines..take 120 volt line
>,connect three wires to the high side ,run line 1 thru a capacitor bank to
>motor L1,run line 2 direct to motor L2, run line 3 through a choke to motor L3
>.. Common ac line to center of Y connection... causes one line to lead one line
>to lag..that will run the motor at about any power you might need, the value of
>Ind and cap will determine what size motor that can be operated.. To
>synchronize three individual inverters to give 3 phase output at 120 degrees
>apart and locked together ,,, may be possible but it is over my head (away
>over)...good luck.. Harold W4PQW

Thanks for the idea. Since I needed to swap motors (different sizes), I hadn't thought of that, but I could include the phase shift components with the motors.
Do you have a source recommendation for formulas or tables that would reveal cap and inductance sizes versus HP or amperage?

Thanks

(E-mail address is invalid to fool spambots)

Rick

1293. Re: OT(sort of): Request to older amateurs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 07:09:21 UTC
From: notagain@worldnet.att.net
Message-ID: <Bc3a8.7913$421.677672@bgtnsc05-news.ops.worldnet.att.net>
Source record: 46434

In article <3C68A634.FEE78E5F@powerup.com.au>, mkelly@powerup.com.au wrote:
>Woulkd it be possible to run all 3 inverters off a single
>frequency source? That way you could divide down some higher
>driving frequency so that the inverters were exactly 120 deg
>apart. Yes/no?
>
>Cheers.
>Murray vk4aok
>
>
You understand my idea exactly:

1.84320 MHz into a divide-by-640 counter yields a
2880 Hz signal. This goes to a CD4017 set up as
a divide-by-3 to yield three 960Hz signals in
phase delayed fashion.

These feed divide-by-16 counters where the 3
least significant bits are decoded as 3 counts
out of 8 to provide the pulse width for the
output pulses and the 4th least significant bit
determines whether the pulse is positive or
negative.

(Some complex phasing connections omitted.)

(E-mail address is invalid to fool spambots)

Rick

1294. Re: 100kHz to 22.5kHz conversion - will it have jitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 07:40:55 UTC
From: notagain@worldnet.att.net
Message-ID: <bG3a8.7928$421.684837@bgtnsc05-news.ops.worldnet.att.net>
Source record: 46435

In article <3c6838d3.15421192@news.online.no>, LA8AK,xnd@Online.NO wrote:
>Looking into design of DCF77.5kHz receiver.
>Suppose (100/4) - (100/4)/10 = 22.5kHz,
>divide 100kHz (divider chain from 10MHz) to 25kHz and mix with 2.5kHz
>to give 22.5kHz. A NAND-gate seem to be a solution, but will give 2
>pulses for every 10 in, so I suppose it will jitter.
>another suggestion is to use analogue mixer with tuned circuits for 25
>and 2.5kHz feeding the mixer
>
>Is the ideas bad?
>
>Need 22.5kHz to mix 77.5kHz to 100kHz, feed it through an xtal filter
>and to the phase detector which is operated on the highest possible
>frequency
>
>73
>LA8AK
I'm a non-amateur lurker here (I have a commercial license) so I cannot
say whether your idea is "bad".

I have an alternate suggestion if it won't offend the NG.

Connect the 100KHz to a divide-by-5 counter then a divide-by-2
counter.
(CMOS 7490 equivalent)

Gives a symmetrical 10KHz output.

Connect the 10 KHz output to one input of an XOR gate
(see note at end for alternate)
Connect the original 100KHz to the other input.

Connect the output of the XOR gate to a MOSFET with a 90KHz tank
circuit in its Drain circuit.
The tank circuit should produce a reasonably pure 90KHz sine wave.
There SHOULD be very little jitter.

Connect the tank circuit through appropriate buffering to a
symmetrical divide-by-4 counter
(2x CD4013s with notQ connected to D input?)

The output will be 22.5KHz with exactly 50% duty cycle.
You should be able to connect this to practically any mixer
circuit (through appropriate interfacing) and get stable results.

NOTE AT END:
You can connect a whole CD4011 chip to act as a single XOR gate

as follows (a CD4011 may be easier to find and you would need
a whole 14 pin chip for just one XOR gate anyway):

Connect pin 2 to pin 6 and label it Input A.

Connect pin 8 around the chip to pin 1 and label it Input B.

Connect pin 3 to pin 5 and across the chip to pin 9.

Connect pin 4 across the chip to pin 13.

Connect pin 10 to pin 12.

The result on pin 11 is "Input A XOR Input B".

(E-mail address is invalid to fool spambots)

Good luck!
Rick

1295. Re: Fuse-type light bulb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 10:53:10 UTC
From: r9c9nixon@mi9nd9spring.com
Message-ID: <3c68f3aa.4278031@news.mindspring.com>
Source record: 46436

"J. McLaughlin" <JCM@Power-Net.Net> wrote:

>Dear Bill: Thanks. I have not used the combination you suggested
>when making google searches. I think of a lamp as being the fixture
>that uses a bulb.
> Thanks for the suggestion. 73 Mac N8TT
>

When I went to Westinghouse Lamp Division product school, many years
ago, the lamp is the thing that lights up, the bulb is the glass
envelope and the luminaire is the thing the lamp mounts in. Just
being pedantic as usual.

Russ

>--
>J. Mc Laughlin - Michigan USA
>Home: JCM@Power-Net.Net
>Office: JCM@McLMcL.Com
>"-Your Friend Bill-" <none@coqui.net> wrote in message
>news:3C673418.E908E1A1@coqui.net...
>> "J. McLaughlin" wrote:
>> >
>> > I have a piece of equipment with bulbs that look like cylindrical
>fuses.
>> > They are just under 20 mm long and just under 5 mm in diameter.
>Both
>> > ends are marked:
>> > RR 12V 1W in small block letters.
>> >
>> > I have searched the WEB and the usual catalogs with no success.
>Does
>> > anyone have a clue as to the proper description or part number?
>> > Thanks.
>> >
>> > Mac N8TT
>> >
>> > --
>> > J. Mc Laughlin - Michigan USA
>> > Home: JCM@Power-Net.Net
>> > Office: JCM@McLMcL.Com
>>
>> These are common in stereo gear. Search fuse lamps on google or ebay
>> and you'll find plenty of sources.
>> -Bill

>>
>

Russ
"Two-fifteen, no ambulance needed!"
Subtract all nines to reply

1296. W9INN Antennas site now ONLINE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 15:55:44 UTC
From: Charles Johnston <ctj92@cableone.net>
Message-ID: <3c693b00@news.bnb-lp.com>
Source record: 46438
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

The Official W9INN Antennas Page is ONLINE at the web site listed below.
It features illustrations, measured field data, and ordering
information.

--

73 / DX

Charles T Johnston
Prescott, Arizona - U.S.A.
charles@ab7sl.com

AB7SL - Ham Radio Pages
Official W9INN Antennas Page
www.ab7sl.com

1297. Re: OT(sort of): Request to older amateurs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 16:16:00 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3C693FC0.D4268F3C@ieee.org>
Source record: 46439

notagain@worldnet.att.net wrote:

> In article <20020211205022.21696.00000791@mb-mp.aol.com>, w4pqwhs@aol.com (W4pqw HS)
wrote:
>
> >Rick,I cannot add much on locating the 60 hz filter but I have had some
> >experience running 3 ph motors on single phase lines..take 120 volt line
> >,connect three wires to the high side ,run line 1 thru a capacitor bank to
> >motor L1,run line 2 direct to motor L2, run line 3 through a choke to motor L3
> >.. Common ac line to center of Y connection... causes one line to lead one line
> >to lag..that will run the motor at about any power you might need, the value of
> >Ind and cap will determine what size motor that can be operated.. To
> >synchronize three individual inverters to give 3 phase output at 120 degrees
> >apart and locked together ,,, may be possible but it is over my head (away
> >over)...good luck.. Harold W4PQW
>
> Thanks for the idea. Since I needed to swap motors (different sizes), I hadn't
> thought of that, but I could include the phase shift components with the
> motors.
> Do you have a source recommendation for formulas or tables that would
> reveal cap and inductance sizes versus HP or amperage?
>
> Thanks
>
> (E-mail address is invalid to fool spambots)
>
> Rick

Do a search for single phase to three phase converters. There is a lot of design
info available on the web.

Bill K7NOM

1298. ATR-2000 QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 16:49:25 UTC
From: Mariusz <sp5hgq@poczta.onet.pl>
Message-ID: <a4bh2fdnl1@news.tpi.pl>
Source record: 46440

Wented full material about ATR-2000 publicated in QEX (maybe PDF ?)

thx Mariusz SP5HGQ@poczta.onet.pl

1299. Help With HP-410B VTVM...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 17:19:33 UTC
From: Michael Melland <w9wis@charter.net>
Message-ID: <u6ijg8kplcuj0e@corp.supernews.com>
Source record: 46441

Anyone out there have a late HP 410B with the EA-53 AC probe tube diode ? I need you to check your manual and tell me what filament voltage is specified for this tube.

The earlier 2-01C tube as listed in my manual states to adjust filament voltage for the probe tube to 5.0 V. While the HP manual states the probe can either be a 2-01C or EA-53 it doesn't specify different filament voltage settings for the two tubes. I've been told the EA-53 is a 6.3V filament tube.....

Mike

--
Michael Melland, W9WIS
Winneconne, Wisconsin USA EN54pc
qrp-l #1656 - qrparci # 9875 - iparc #252
ars #1075 - http://www.qsl.net/w9wis

1300. Re: receiver front end noise question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 17:46:12 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0202120946.6a7231a7@posting.google.com>
Source record: 46442

Others have done a good job of answering your question.

There are a few other things that should be pointed out, however.

The noise figure of a receiver is typcially dominated by the first
active stage. If the first stage has a low gain, however, the
following stages become significant.

Any loss ahead of the first stage directly adds to the noise figure of
the receiver, dB for dB. Diode mixers usually have about 6 dB loss
(on HF, more at higher frequencies).

Unless you have a relatively sharp filter ahead of the mixer you may
find that the noise floor is 3 dB higher than expected. This is
because the mixer will be picking up noise from both sidebands.
Because the signal is only in 1 sideband the SNR will also be 3 dB
worse than expected. Your IF frequency should be such that the
unwanted sideband is far enough away for effective filtering.

Jim
N8EE

hexter@blazenet.net (gudmundur) wrote in message
news:<u6g599ik30a363@corp.supernews.com>...
> I am trying to make a microwave receiver more sensitive, and I have
> run into a noise floor problem. Here is the layout,
>
> X-band waveguide input directly into a mixer consisting of
> a 1N23E, and a 1N23ER balanced mixer setup. Local osc is divided
> to drive the balanced mixer pair, and the drive is about 0dbm.
>
> The noise figure of the diodes is stated as being 8 Db, and they
> are driving about 300 ohms resistive load per each.
>
> Question 1, For a SNR of 10 Db looking at the load resistors, what
> is the minimum detectable input signal to the waveguide? Use 8 mhz
> as the bandwidth of interest if that is important to the calculation.
> The I.F. freq is 60 mhz.
>
> Is it possible to get 10 Db SNR from an input signal as low
> as -115 Dbm at the waveguide input flange, or is the noise floor
> substantialy above that level?
>
> Question 2. The diodes are driving a 2SC1855 transistor used as
> an impedance converter and gain stage. Do you feel that this particular
> transistor is to noisey for the job at hand?

>
>
> I ask these questions relative to AM modulated ATV. I have about
> 60 Db of I.F. gain driving an ECG 1187 as my video detector/amp.
>
> I tried adding 20 Db of I.F. gain, and it did not help the receiver
> input sensitivity at all! The only thing I got was 20 Db higher noise
> output.
>
> Question 3. Would it make better sense to give up on I.F. gain, and
> start working on microwave gain prior to the mixers?
>
> Thank you kindly for any help or suggestions, 73
>
> (WN3SOH,WB3BIO,KD3SH)
>
> A.K.A. Bink

1301. need help: where to buy components like Carbon Film Resistor cheap online?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 17:55:03 UTC
From: djaelee@yahoo.com
Message-ID: <3c2742b5.0202120955.4d2815e@posting.google.com>
Source record: 46443

Is Jameco Electronics' price good?
Please advise your low price DistributorS.
Thanks a lot for your help.

1302. Re: BUZ45 Datasheet?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 19:16:33 UTC
From: knox_k@nemaine.com
Message-ID: <3c696a09.792697@news.nemaine.com>
Source record: 46444

On Tue, 12 Feb 2002 05:33:31 GMT, "ianburn" <ianburn@shaw.ca> wrote:

>Can anyone point me to a source of a BUZ45 power mosfet data sheet?
>
>Thanks
>Ian, VE6OB
>
>

See:

http://atlas.cc.itu.edu.tr/~yildiri1/oldy/sp00elk334e/data/buz45.pdf

1303. Re: You have got to build this in order to believe it!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 19:23:12 UTC
From: testing_h@yahoo.com
Message-ID: <2c2cf14c.0202121123.15ae3273@posting.google.com>
Source record: 46445

blackm00@cam.org (Michael Black) wrote in message
news:<6447bcd3.0202090921.ab018aa@posting.google.com>...
> braincambre500@yahoo.com (Patrick) wrote in message
news:<85a87c6c.0202082237.db6ced2@posting.google.com>...
> > Hello all,
> >
> > Introducing the "Radio Shack Special". Well, that's what I call it.
> >
> > A few weeks ago I had spotted, from ARRL, an FM VHF regenerative
> > receiver that had two transistors, 2 large and cumbersome coils, and
> > many resistors, pots and capacitors. The PCB was rather large.
> >
> > I have managed to get this receiver down to a 12 component count!
> >
> > It works marvalously. I still can't believe it is still functioning
> > with only one transistor (MPF102) and one "small" coil, and a few
> > other components.
> >
> > I put an LM386 behind it, and the quality in the headphones is an
> > understatement!
> >
> > The sensitivity, the selectivity and the great audio output is
> > astonding to me. I have build this receiver 5 times, just to
> > reassure myself I am not dreaming.
> >
> This is so hyped up, it almost seems like you are selling something.
> If your design is so hot, and so small, put it on a webpage somewhere,
> and let people visit it, and discuss it.
>
> Do a proper bibliography, and let us know exactly what circuit you
> started with. Somehow, I suspect you've got ahold of one of
> Chrles Kitchin's articles. He's spent a lot of time looking at
> regen and superregen articles, and updating them to match present
> devices and situations. If it is derived from one of his circuits,
> take note that he has tried to improve the performance of the superregen,
> and those "unneeded" parts are an attempt at getting around some
> of the traditional limitations of the circuit. Take that stuff out,
> and you've got nothing special. If you look in the old books and
> magazines, you can find a ton of superregen circuits, and virtually
> all of them are as simple as you can get. One transistor, and maybe
> some audio amplification. Yes, very simple to build, but with
> lots of limitations. At the very least, without an RF stage between
> the antenna and the superregen detector, the thing will radiate and
> interfere with nearby radios and TVs.

I saw one based on a tunnel diode once ...

>
> Check out the 2001 ARRL Handbook (and probably other editions). It
> has one of Charles Kitchin's superregen receivers. Two transistors,
> one coil, and an LM386 AF amplifier. I can't remember if this is
> his latest variation, or there's been something better. Take note
> that he has tried to improve the selectivity; most superregens are
> notorious for a wide passband.
>
> I've posted a list of his superregen articles previously, and can't
> be bothered checking right now. He had an article in the
> Fall 1994 issue of Communications Quarterly, that I've never seen
> but assume is an overview of the topic. The article in the Handbook
> was originally published in QST some years back. He had an article
> in QEX after that. There might have been another. He's also written
> a number of articles about regen receivers.
>
> But thanks for reminding me. After I mentioned his work on a previous
> occasion, he sent me a pdf file of one of his later articles, and I
> didn't have the computer to view it. I do now, and I must take
> a look.
>
> Michael VE2BVW

1304. Re: HP Oscillator from an HP5245L counter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 20:44:28 UTC
From: Norm Mann <folder0735@hotmail.com>
Message-ID: <3c697fee$0$188@news.impulse.net>
Source record: 46446
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

"Tracy" <thooker@psl.nmsu.edu> wrote in message
news:a48p2h$k2i$1@bubba.NMSU.Edu...
> That explains a lot! The oscillator has the 10544 part number, with
> a -60036 after it. It definitely puts out 1 MHz. I took the A26 card out
> and began tracing it, and sure enough, there is a section that looks like
a
> buffer, but no multiplier. I took the A27 out, and it has 6 variable
> inductors along the top, and three transistors. The multiplier?

Yes, in three sections: x2, x5 and amplifier.

> So, two things that would really help:
>
> A schematic / pinout of the A26 card

P1-1,3,6,7,13 (0V)
P1-5 (osc/agc output)
P1-10 ("trigger" amplifier input)
P1-6 (-15V)
P1-15 (20V)
P1-14 (1MHz out to A27 card) approx 0.5Vp-p
P1-9 (1MHz out to A35 card) approx 1.5Vp-p
P1-11 (1MHz out to A28 card) approx 2Vp-p, capacitor coupled output
P1-12 (1MHz out to A5 card) approx 2Vp-p

I'll assume you don't need the pinouts for the P2 connector.
Note: connect P1-5 to P1-10.

> A schematic / pinout of the A27 card

P1-14 (1MHz input)
P1-2 (10MHz output)
P1-15 (-15V)
P1-5,6 (0V)

> Any info you could forward would greatly assist me. Maybe I should just
> find a counter with an actual 10 MHz oscillator in it!

No need to tear apart a perfectly good counter just for a time base. There
should be other options available.
Sorry, I can't supply schematics except via snail mail, but it looks as if
another poster has sent them to you already.

-CB

1305. Re: 100kHz to 22.5kHz conversion - will it have jitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 22:38:03 UTC
From: k7itm@aol.com
Message-ID: <3200347.0202121438.6351d9c8@posting.google.com>
Source record: 46348

Well, since tuned circuit for 25kHz, and especially for 2.5kHz, might
be a bit awkward (though you could use active filters...), how about
using your existing 10MHz and presumably you have 1MHz, and mix them.
Select the 9MHz difference, and divide that (by 400--very easy to do)
to get the 22.5kHz. You could also do it with a PLL running the phase
detector at 2.5kHz, I suppose (or higher, and divide down to 22.5kHz).
Lots of possible ways, but as you note, you'd like a 22.5kHz that is
clean (except for harmonics).
Cheers,
Tom

la8ak.xnd@online.no (J M Noeding) wrote in message
news:<3c6838d3.15421192@news.online.no>...
> Looking into design of DCF77.5kHz receiver.
> Suppose (100/4) - (100/4)/10 = 22.5kHz,
> divide 100kHz (divider chain from 10MHz) to 25kHz and mix with 2.5kHz
> to give 22.5kHz. A NAND-gate seem to be a solution, but will give 2
> pulses for every 10 in, so I suppose it will jitter.
> another suggestion is to use analogue mixer with tuned circuits for 25
> and 2.5kHz feeding the mixer
>
> Is the ideas bad?
>
> Need 22.5kHz to mix 77.5kHz to 100kHz, feed it through an xtal filter
> and to the phase detector which is operated on the highest possible
> frequency
>
> 73
> LA8AK

1306. FS/FT Ham Rotor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 22:52:20 UTC
From: KC8SSG <kc8ssg@qsl.net>
Message-ID: <E0ha8.148$vG4.2591@news>
Source record: 46347
Cross-posted to: alt.ham-radio.marketplace,alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

I have what I believe to be a Hygain Ham Rotor. Everyone tells me it is but I don't know for sure. I can send pics if you like. I'm interested in either a light duty rotor and controller, 2 meter or 6 meter equipment or just about anything related to ham radio.Email for pic or to make an offer. crandall@ee.net

thanks
Rob
--
KC8SSG

1307. Re: HP Oscillator from an HP5245L counter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 23:10:12 UTC
From: Tracy <thooker@psl.nmsu.edu>
Message-ID: <a4c7eg$l0a$1@bubba.NMSU.Edu>
Source record: 46349
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Well, you are right, or course. I got the picture of the oscillator and the file containing the x10 multiplier. It is much different than the multiplier A27 board from this counter, but I can use it to build one if necessary.

My real goal is to get a really good 10 MHz standard for my workshop. It sounds like it would be a lot easier to get an old HP5245M with the hi stability oscillator and just use it.

BTW, the oscillator I have looks just like the one in the picture, except the p/n is 10544-60036.

Thanks everybody for the help!!!

Tracy

"Rex" <notreally@hotmail.com> wrote in message
news:hebg6usvuj9qlruk6geevhtkuv56024krg@4ax.com...
> On Mon, 11 Feb 2002 08:46:30 -0700, "Tracy" <thooker@psl.nmsu.edu>
> wrote:
>
> >Norm,
> >
> >That explains a lot! The oscillator has the 10544 part number, with
> >a -60036 after it. It definitely puts out 1 MHz. I took the A26 card
out
> >and began tracing it, and sure enough, there is a section that looks like
a
> >buffer, but no multiplier. I took the A27 out, and it has 6 variable
> >inductors along the top, and three transistors. The multiplier?
> >
> >
> >
> >So, two things that would really help:
> >
> >A schematic / pinout of the A26 card
> >
> >A schematic / pinout of the A27 card
> >
> >
> >
> >Any info you could forward would greatly assist me. Maybe I should just
> >find a counter with an actual 10 MHz oscillator in it!
>
> Tracy,

>
> I sent you an email with a picture of a 10544 and the block diagram
> of the 5245. That answers your questions about the functions of A26
> and A27. In my email (copied below) I describe the same physical
> layout of A27, and that it is the multiplier. Why are you still
> confused??
>
> You received a reply from Rick Karlquist that also seemed surprised
> that the 10544 could have a 1 MHz output. He is one of the best
> informed people you could find. He designed a lot of HP's best
> sources and counters. Does the 10544 look like the picture I sent?
>
> Since it was driving the A27 card which multiplies 1 MHz to 10 Mhz,
> I guess you do have a strange version that somehow outputs 1 MHz.
>
> What is your final goal? Look at the block diagram and decide how
> much you care about. Is the multiplier all you need? I'm thinking
> that anything from a26 (1 MHz buffer to the divider) through the
> divider chain might be easier by homebrewing with modern chips than
> using the very old 5245 discrete design.
>
> quoted email:
> >>I'm sending two files. First is a picture of the 10544 which
> >>I've only heard of as being a 10 MHz osc. The crystal oven
> >>portion of my 5245 is a cylinder about two inches in dia.
> >>If yours has a 1 MHz output, then the rest might be standard
> >>5245 stuff. The 2nd file is a scan of the block diagram from
> >>the service manual. You can see if it looks similar.
>
> >>The 10 MHz multiplier (A27) is a small board with 6 coils and
> >>3 transistors. A35 is a long thin board. The divide-by-10 blocks
> >>are each implemented on a board with about 7 discrete transistors.
>
> >>Don't know if any of this matches yours but this is what's in
> >>my old 60's version.
>
> >>-Rex, KK6MK
>
> -Rex
> [rexa -TheAtSign- Next4dnaiLetters -period- (UsualComEnd)]<
my_eemale_addy

1308. What epoxy/adhesive should I use?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 23:29:02 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0202121529.25637e84@posting.google.com>
Source record: 46350

I am working on a homebrewed 1/4 wavelenth HT antenna with an SMA connector.

I tried using silicone to hold the copper wire into the SMA connector (to hold the wire in place so that it wouldn't fall out). It didn't work. (I should save the silicone for repairing minor headlight damage, which is what I bought it for in the first place.)

So what kind of epoxy or adhesive should I use instead? I think I need something that lacks viscosity at first, becomes very hard when solidified, and doesn't allow air pockets to form inside.

Jason Hsu, AG4DG
jason_hsu_802701@@@yahoo.com

1309. Re: need help: where to buy components like Carbon Film Resistor cheap online?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 23:29:33 UTC
From: Mark Hall <vze2mhvc@bellatlantic.net>
Message-ID: <3C69A43C.B4C0EE9D@bellatlantic.net>
Source record: 46351

Check out
http://www.Digi-key.com

DJ Lee wrote:

> Is Jameco Electronics' price good?
> Please advise your low price DistributorS.
> Thanks a lot for your help.

1310. Re: 100kHz to 22.5kHz conversion - will it have jitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 23:33:24 UTC
From: la8ak.xnd@online.no
Message-ID: <3c699b80.76970118@news.online.no>
Source record: 46352

On Tue, 12 Feb 2002 07:40:55 GMT, notagain@worldnet.att.net wrote:

>I'm a non-amateur lurker here (I have a commercial license) so I cannot
>say whether your idea is "bad".
>
>I have an alternate suggestion if it won't offend the NG.
>
>Connect the 100KHz to a divide-by-5 counter then a divide-by-2
> counter.
> (CMOS 7490 equivalent)
>
>Gives a symmetrical 10KHz output.
>
>Connect the 10 KHz output to one input of an XOR gate
> (see note at end for alternate)
>Connect the original 100KHz to the other input.
>
>Connect the output of the XOR gate to a MOSFET with a 90KHz tank
>circuit in its Drain circuit.
>The tank circuit should produce a reasonably pure 90KHz sine wave.
>There SHOULD be very little jitter.
>
>Connect the tank circuit through appropriate buffering to a
>symmetrical divide-by-4 counter
>(2x CD4013s with notQ connected to D input?)
>
>The output will be 22.5KHz with exactly 50% duty cycle.
>You should be able to connect this to practically any mixer
>circuit (through appropriate interfacing) and get stable results.
>
>
>
this is certainly a very much better idea, but still I can't see that
it doesn't jitter.
Draw the time sequence diagram for CD4017 (signal from carry) with
CD4070 and second divider CD4013, but the resulting waveform (without
tuned circuit) varies in content, so I suspect that it will create
jitter which is very critical for an offf-air reference oscillator to
calibrate microwave equipment, even if it looks fine and symmetrical
when the 90kHz BPF is connected..

Also considered to use CD4526 (have hundreds of this device, too), but
can't see it has any advantage over CD4017 for the purpose

Supposed to take the output from CD4070 via a resistor to a capacitive tap on a tuned circuit and at the same time go to an inverter (1/4 CD4070) as a quasi-linear stage. Have some surplus 4.5mH coils with Q=650, a suggestion is to use a capacitive divider of 12+15nF capacitors, but have not calculated the loaded Q-value for this circuit

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

1311. Re: Delta hetrodye

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 23:33:24 UTC
From: la8ak.xnd@online.no
Message-ID: <3c69a004.78126968@news.online.no>
Source record: 46353

On Tue, 12 Feb 2002 08:15:48 +1100, "Peter Parker"
<parkerp@alphalink.com.au> wrote:

>
>"Michael Black" <blackm00@cam.org> wrote in message
>> My 1978 edition of "Amateur Radio Techniques" (a compendium of material
>> from the Technical Topics column in the RSGB's Radio Communication)
>> mentions a "Deltahet" by VK2AZN in "Radio, Television and Hobbies",
>> though no date of the original article is given.
>
>The first version was a valve version. The later one was solid state
>(around early 70s).
>The valve set would have been around the mid-60s.
>
>I think more people had better luck with the valve one than the solid state
>version.
>
>Peter
>
>
but I think you must make a long search to find somebody who could
build the required 40Mc/s bandpass filter, and I suspect such filter
is not satisfactory for modern day receivers. Remember the Heathkit
SB-300 has some bad bandpassfilters - even for 9MHz, and too simple
filters were a general problem for many old amateur radio rigs

Discovered that ECC84/6CW7 is an interesting valve for cascode
amplifiers (see G2DAF receivers), it will run with 6mA current on only
50-60v per system (have not calculated the conductance), seems to be
the only possible valve for receivers with low supply voltage as used
for Drake 2-B, 4-C, SB-300, 51-S etc, but for one reason or another it
was obsolete since 1958

see http://frank.nostalgiaair.org/sheetsE.html or
http://frank.nostalgiaair.org/sheets6.html for valve data and
characteristics

73
Jan-Martin
--
remove ,xnd to reply

1312. Re: What epoxy/adhesive should I use?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-12 23:43:54 UTC
From: Mark Hall <vze2mhvc@bellatlantic.net>
Message-ID: <3C69A799.B683EEEE@bellatlantic.net>
Source record: 46354

I would think 5 minute Epoxy would work fine.. be sure you solder the
wire to the pin first though.

Jason Hsu wrote:

> I am working on a homebrewed 1/4 wavelenth HT antenna with an SMA
> connector.
>
> I tried using silicone to hold the copper wire into the SMA connector
> (to hold the wire in place so that it wouldn't fall out). It didn't
> work. (I should save the silicone for repairing minor headlight
> damage, which is what I bought it for in the first place.)
>
> So what kind of epoxy or adhesive should I use instead? I think I
> need something that lacks viscosity at first, becomes very hard when
> solidified, and doesn't allow air pockets to form inside.
>
> Jason Hsu, AG4DG
> jason_hsu_802701@@@yahoo.com

1313. Re: need help: where to buy components like Carbon Film Resistor cheap online?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 00:25:40 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u6jcov6n18u753@corp.supernews.com>
Source record: 46355

Actually, I think it's www.digikey.com, no hyphen.

Digikey's prices aren't bad, and their service is stellar, but often it helps to look around. Oh yeah, and unless you are in Outer Mongolia, make sure to specify UPS ground. Their default shipping is 2nd day air which can get expensive. At least where I am, it's over 5 times the price and no faster.

For example, plain old 1/4 watt carbon film resistors from DigiKey are 5.6 cents each if you buy 5, just under 2 cents if you buy 200. However, www.radioshack.com sells them for 7 cents each for less than 10, but a penny a piece if you buy 100. 100 may sound like a lot, but it's only a buck, and for common values this doesn't take long to become a good deal. It always pays to put 10 or 100 into radioshack's quantity box to see what happens - sometimes there are surprises. They do have the worst search engine on the planet so unless you have the RADIO SHACK part number, you need to browse.

RF specific parts are a little harder. DigiKey has almost nothing, radioshack.com has some, but often they are expensive. Dan's Small Parts has a lot of RF stuff at good prices, but he only takes orders by snail mail so it's at least a couple of weeks. http://kitsandparts.com has a very limited selection of some hard to find parts, but his prices are very good.

If you need something hard, like an RF power transistor or an air variable cap, www.rfparts.com has probably the best selection, but they are definitely the high priced spread.

I like to get stuff from B.G. Micro a lot. You need to watch it, but often they have extremely good prices. Their selection is a little eclectic, however, and their prices aren't always good, so you need to look around. For connectors, especially non-RF, and odd mechanical parts, Mendelhson's often has a good deal, but again, an odd selection.

At the end of the day, you got to do a lot of shopping, and it's complicated by the shipping which usually favors larger orders. (Not always, radio shack is expensive for large orders!) On the other hand, it sure is a lot easier than it was 20 years ago.

..

"Mark Hall" <vze2mhvc@bellatlantic.net> wrote in message
news:3C69A43C.B4C0EE9D@bellatlantic.net...
> Check out
> http://www.Digi-key.com
>

> DJ Lee wrote:
>
> > Is Jameco Electronics' price good?
> > Please advise your low price DistributorS.
> > Thanks a lot for your help.
>

1314. Re: 100kHz to 22.5kHz conversion - will it have jitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 00:36:18 UTC
From: la8ak.xnd@online.no
Message-ID: <3c69b0e6.82449394@news.online.no>
Source record: 46356

On 12 Feb 2002 14:38:03 -0800, K7ITM@aol.com (Tom Bruhns) wrote:

>Well, since tuned circuit for 25kHz, and especially for 2.5kHz, might
>be a bit awkward (though you could use active filters...), how about
>using your existing 10MHz and presumably you have 1MHz, and mix them.
>Select the 9MHz difference, and divide that (by 400--very easy to do)
>to get the 22.5kHz. You could also do it with a PLL running the phase
>detector at 2.5kHz, I suppose (or higher, and divide down to 22.5kHz).
> Lots of possible ways, but as you note, you'd like a 22.5kHz that is
>clean (except for harmonics).
>Cheers,
>Tom
>

Hi Tom!

one of the only solutions I can see to avoid jitter is to use a x9
multiplier - with simple 9MHz xtal filter and divide down to 22.5kHz,
but it is a waste to use this divider from 9MHz down to 22.5kHz.

Another suggestion is to use 50kHz signal with a x9 multiplier to
450kHz - easy to find 455kHz LC-type IF-filters.
100kHz leakage may be a problem(?)

Have you a good suggestion for a harmonic generator?

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

1315. Re: Homebrew Keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 00:59:12 UTC
From: jehancoc@pacbell.net
Message-ID: <a95870c1.0202121659.4cdd03db@posting.google.com>
Source record: 46358

I am an amateur machinist and was wondering the same thing. I would
like to build my own set of paddles for a keyer.

Anyone have any detailed pictures/drawings to give me an idea? I have
a
small CNC mill and CNC lathe. If someone had the drawings (or could
point
me at good pictures to derive (alright copy) a good design, I would
offer
to machine some of the parts for them.

I was thinking of using wieghted black lexan for the base and paddles.
Brass and stainless for the rest. I downloaded the K8+ keyer code for
the PIC
16F84 and it works fine, so I guess the electronics are good for now.

30 years ago when I was a novice, I had limited funds and still had to
have
the best gear the store would sell. Now I have unlimited funds and
would like
to scratch build everything. I have my VFO and DSP done. I am
working on a
receiver/transmitter combo and would like to front-end it with my own
keyer.

thanks.

Skipp <skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote in message
news:<a2km09$ml8$1@woodrow.ucdavis.edu>...
> Hi Michael,
>
> It really wouldn't make a lot of sense to design and produce a new setup
> as the market is flooded with them now. Plus those original Heathkit
> uMatic (micro matic) keyers are all over Ebay. I have one myself and they
> work pretty well. I still prefer my vintage original Ham Radio Outlet one
> knob keyer though.
>
> 73's
> skipp
> http://sonic.ucdavis.edu
>
> : KU4YP <ku4yp@earthlink.net> wrote:
> : hello all,
>
> : i saw a neat homebrew keyer/paddle combination and wanted to ask if anyone
> : has plans for one? something like the heathkit keyer/paddle unit.

>
> : any help appreciated.
> : --
> : 73 de KU4YP "There is no spoon......"
> : Michael Prevatt
> : Willow Oak, Florida 10X #70625
> : Active HF/VHF/Digital 10X International Net

1316. Re: What epoxy/adhesive should I use?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 02:03:56 UTC
From: "news.bellatlantic.net" <vze3kq35@verizon.net>
Message-ID: <gQja8.10666$Vt3.1620@nwrddc01.gnilink.net>
Source record: 46359

There are paste form two part epoxies -- used in marine applications -- some of them will dry under water! I have had pretty good success with forming parts with them. I have also used them to make good screw mounts in materials like wood where you can tap the polyester resin to a much higher degree of precision than wood.

"Jason Hsu" <jason_hsu@my-deja.com> wrote in message news:f7d9a152.0202121529.25637e84@posting.google.com...
> I am working on a homebrewed 1/4 wavelenth HT antenna with an SMA
> connector.
>
> I tried using silicone to hold the copper wire into the SMA connector
> (to hold the wire in place so that it wouldn't fall out). It didn't
> work. (I should save the silicone for repairing minor headlight
> damage, which is what I bought it for in the first place.)
>
> So what kind of epoxy or adhesive should I use instead? I think I
> need something that lacks viscosity at first, becomes very hard when
> solidified, and doesn't allow air pockets to form inside.
>
> Jason Hsu, AG4DG
> jason_hsu_802701@@@yahoo.com

1317. Re: MMIC based preamp for R2 receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 02:12:42 UTC
From: John Seboldt <john@seboldt.net>
Message-ID: <3c69cb4c$0$89924$272ea4a1@news.execpc.com>
Source record: 46360

"Brock Schuler" <brocks@mailandnews.com> wrote in message
news:674752f2.0201181659.2e9069ef@posting.google.com...
> Thanks for the responses. I was planning on using a full size dipole
> antenna. I had heard that a preamp was a good idea for 20M. I plan to
> use this radio in remote locations and thought that by switching in a
> preamp I would be able to pull in some otherwise unreadable signals.
> But for now I won't worry about preamps or filters and add them latter
> as needed.
>
> Brock Schuler, VA6BTS

In my R2, I don't find a need for a preamp on 20 meters, since I hear more noise with the antenna hooked up than unhooked. I have tried an MAR-6 preamp, but it is a lot of gain, as others have said - it did bring signals out of the noise on a very quiet band, but for sure would collapse with a busy band. Interestingly, Rick uses the MAR-6 as a preamp for entry-level VHF work in his "Little Mother Board" available from Kanga, but that would be just that - entry-level, simple to build, performing "OK" as a starter.

John K0JD

1318. """""" Looking for Software""""""""

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 03:51:04 UTC
From: bbradio <drbadboy@hoymail.com>
Message-ID: <MPG.16d39fa1be49dee398968e@news.easynews.com>
Source record: 46361

Plez Help
Im looking for a program that I can use to design my own type of antennas from directional to omidirectional for different Frequency ranges of my CB,TV & Scanner that would give the length of the Boom ,Elements & Spacing type of Coax for each,best material to use (which I have some Alum. to use) and whatever else a person needs to know to build their own super homemade antennas. Also below is a list of manufacture spec. of 11meter cb antennas & rotors that I have and would scan [A Beem or Rotor Info] and e-mail for trade for the info I request above. TIA

(BIG DADDY) 5 ELEMENT BEAM 4 PAGE ASSY. INST. AND PARTS LIST

(M106C) 6 ELEMENT BEAM 10 PAGE ASSY. INST. AND PARTS LIST

(LIGHTING 6) 6 ELEMENT BEAM 11 PAGE ASSY. INST. AND PARTS LIST

(COMET) BY MACO 6 ELEMENT 10 PAGE ASSY. INST. AND PARTS LIST

(SUPER DUO-BEAM) BY HY-GAIN MODEL SDB-6 6 ELEMENT 12 PAGE ASSY. INST. WITH PARTS LIST

(GOLDEN SUPER PENETATOR) BY HY-GAIN OMNIDIRECTIONAL 6 PAGES WITH PARTS LIST

(HY-GAIN) 5ELE. BEAM (DON'T KNOW NAME ASSY. INST. MANUAL HAS ORDER # 410) 9 PAGES WITH PARTS LIST

(116DB) TWIN DRIVEN BY HY-GAIN INST. MANUAL # 542 6 ELE. BEAM 8 PAGES & PARTS LIST

(MOONRAKER 4) MODEL AV-140 BY AVANTI 19 PAGE ASSY. INST. & PARTS LIST

(MOONRAKER 4) MODEL AV-140 BY ANTENNA SPECIALISTS 16 PAGE ASSY. INST. & PARTS LIST

(MOONRAKER 6) MODEL AV-146 BY AVANTI 12 PAGE ASSY. INST. PARTS LIST

(ASTRO-BEAM) MODEL AV-150 BY AVANTI 20 PAGE ASSY. INST. & PARTS LIST

(SHOOTING STAR) 10 PAGE ASSY. INST. & PARTS LIST

(MOSLEY A-311-S) 3 ELEMENT BEAM 3 PAGE ASSY. INST. & PARTS LIST

(MOSLEY ASK-345) ASSY. INST. FOR MOSLEY UNIVERSAL STACKING KIT 9 PAGES

(MOSLEY A-311-S, A-311, A-411-S) STACKING INST. FOR THESE 3 MOSLEY ANTENNAS 8 PAGES PLUS PARTS LIST

(MOSLEY A-511-S) ASSY. INST. & PARTS LIST FOR THIS 5 ELEMENT BEAM

(PDL-II) BY ANTENNA SPECIALIISTS 18 PAGES INCLUDING PARTS LIST

(PDL-II) BY AVANTI 20 PAGES INCLUDING PARTS LIST

(SUPER LASER 500) BY WILSON 16 ELE. BEAM 10 PAGES INCLUDING PARTS LIST

(LAZER 400) BY WILSON 12 ELEMENT BEAM 10 PAGES INCLUDING PARTS LIST

(SUPER SCANNER) MODEL MS119 BY ANTENNA SPECIALISTS OMNI OR DIRECTIONAL 16 PAGES INCLUDING CONTROL BOX SCHEMATIC

(A-99) BY SOLARCON GROUND PLANE INST. MANUAL 13 PAGES

(STINGER 302) BY FINCO GROUND PLANE WITH INSTRUCTION MANUAL & PARTS LIST

(STARDUSTER) GROUND PLANE PACKAGE LIST & ASSEMBLY INST

(CD-44) ROTOR SYSTEM (OWNERS MANUAL) BY CORNELL-DUBILIER 8 PAGES WITH PARTS LIST FOR CONTROL UNIT & ROTOR AND ELECTRIAL DIA.

(HAM II) ROTOR SYSTEM (OWNERS MANUAL) BY CORNELL-DUBILIER 12 PAGES WITH PARTS LIST FOR CONTROL UNIT & ROTOR AND DIA.

(MODEL SA-22L) ROTOR SYSTEM (OWNERS MANUAL) 4 PAGES WITH PARTS LIST

1319. Yaesu FT-757GX PLL jumping freq. (alignment hints ??)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 03:56:35 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <u6jdna550lumce@corp.supernews.com>
Source record: 46357
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I have a FT757GX that will drift up and down a khz or so after
it has been on for some time. Some times it takes quite a while
(more than an hour) to drift, if at all. I suspect that since it is such a
compact radio the VCO is getting warm. I have a RF VTVM
and freq counter. Before going in a trying an alignment, is there
anything I should know or be wary of? I have the Tech supplement
that gives an aligment procedure. Just trying to be cautious. Looks
like just taking it apart might be a chore.

73 Doug N4IJ

1320. Re: Yaesu FT-757GX PLL jumping freq. (alignment hints ??)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 05:42:06 UTC
From: John <hydro@fx2.com>
Message-ID: <R%ma8.443$214.346350@newsfeed.slurp.net>
Source record: 46362
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Doug
All the plastic trimmer caps are bad. Must have fix 10 of those
radio's. It's a normal & very common problem with all makes after many years

John

1321. Re: OT(sort of): Request to older amateurs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 07:02:01 UTC
From: "mkelly@powerup.com.au" <mkelly@powerup.com.au>
Message-ID: <3C6A0F69.33E8186B@powerup.com.au>
Source record: 46363

I have seen (don't ask where) a divide by three circuit
much simpler than that, used in a CW keyer to get the dot/dash
ratio correct.

Locate that circuit and a simple 555 timer would give you enough
exactness (probably) to keep the line frequency.

Good luck.
Murray vk4aok

notagain@worldnet.att.net wrote:
> You understand my idea exactly:
>
> 1.84320 MHz into a divide-by-640 counter yields a
> 2880 Hz signal. This goes to a CD4017 set up as
> a divide-by-3 to yield three 960Hz signals in
> phase delayed fashion.
>
> These feed divide-by-16 counters where the 3
> least significant bits are decoded as 3 counts
> out of 8 to provide the pulse width for the
> output pulses and the 4th least significant bit
> determines whether the pulse is positive or
> negative.
>
> (Some complex phasing connections omitted.)
>
> (E-mail address is invalid to fool spambots)
>
> Rick

--
****
* Murray Kelly vk4aok mailto://mkelly@powerup.com.au *
* 29 Molonga Ter. / Graceville/ QLD. 4075/ Australia *
* ph/fax Intl+ 61 7 3379 3307 *
****

1322. Re: 100kHz to 22.5kHz conversion - will it have jitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 08:07:17 UTC
From: notagain@worldnet.att.net
Message-ID: <V8pa8.1808$Nv5.155021@bgtnsc05-news.ops.worldnet.att.net>
Source record: 46364

In article <3c699b80.76970118@news.online.no>, LA8AK,xnd@Online.NO wrote:

>this is certainly a very much better idea, but still I can't see that
>it doesn't jitter.
>Draw the time sequence diagram for CD4017 (signal from carry) with
>CD4070 and second divider CD4013, but the resulting waveform (without
>tuned circuit) varies in content, so I suspect that it will create
>jitter which is very critical for an offf-air reference oscillator to
>calibrate microwave equipment, even if it looks fine and symmetrical
>when the 90kHz BPF is connected..
>
>Also considered to use CD4526 (have hundreds of this device, too), but
>can't see it has any advantage over CD4017 for the purpose
>
>Supposed to take the output from CD4070 via a resistor to a capacitive
>tap on a tuned circuit and at the same time go to an inverter (1/4
>CD4070) as a quasi-linear stage. Have some surplus 4.5mH coils with
>Q=650, a suggestion is to use a capacitive divider of 12+15nF
>capacitors, but have not calculated the loaded Q-value for this
>circuit
>
>73
>Jan-Martin
>LA8AK

Ooops.
I didn't intend for the tuned circuit to be a BPF. Let me suggest a
replacement circuit for the MOSFET and see if my idea is
clearer.

Connect the output of the XOR through a resistive divider to the
base of transistor #1 of a long-tailed pair.
Connect the base of transistor #2 to a bypassed resistive divider
or to a zener and bias resistor.
Experiment with a value for the common emitter resistor.
Connect your 4.5Mh coil tank circuit in the collector of transistor #2.

Now transistor #1 of the long-tailed pair is effectively switching
a high impedance current source (transistor #2) into a Hi-Q
free-wheeling tank circuit. The Q of the tank circuit will determine
the distortion and stability of the 90Khz waveform. With very
light loading, the 90Khz tank would act as a damped sine
wave source. The switched current source serves only to jog
the tank circuit at a 90Khz rate to prevent the waveform from
decaying.

The capacitive tap could be used to reduce the load on the tank circuit presented by the following circuit (your inverter?).

(E-mail address is invalid to fool spambots)

Lurker Rick

1323. SSb board for Icom IC R100

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 10:47:40 UTC
From: Ennio Vernengo <ennio@vernengo.com>
Message-ID: <b4a8200a32c27bc1d69527a2d26aab71.69565@mygate.mailgate.org>
Source record: 46365

Help me, i'm looking for the ssb board to modify my IC R100; anyone
knows how i can read or buy somthing about these ??
thanks.

Ennio Vernengo
IW1 QDL

--
Posted via Mailgate.ORG Server - http://www.Mailgate.ORG

1324. Question on News Group protocol

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 13:21:15 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0202130521.1bb9b079@posting.google.com>
Source record: 46366

Should replys to a post be placed at the beginning or end of the original post?

I am restricted to using Google for accessing news, and Google only displays the beginning of a long post, unless you 'click here to read the rest'.

I find it easier to read a reply if it is placed at the beginning. Embedded comments are hard to follow particularly if they go beyond Googles line limit.

Jim
N8EE

1325. Re: 100kHz to 22.5kHz conversion - will it have jitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 14:37:37 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0202130637.6b7099c8@posting.google.com>
Source record: 46367

Dan Tayloe <dtayloe@home.com> wrote in message news:<3C687F5A.DF58FF7F@home.com>...
> In my experience, a NAND gate mixer is only good to get the difference.
> A better mixer is a XOR (7486) gate. However, digital mixing has never
> worked very well for me due to the extremely high level, very high order
> mixing product. Lots of birdies from high order mixing products!
>
> - Dan Tayloe, N7VE; Phoenix, Az, Az ScQRPions

Dan, this is slightly off-topic, but have you ever tried using a 'D'
flop as a mixer? The higher frequency goes to the 'D' input, and the
lower frequency to the CLK input. The difference appears at the 'Q'
output. Since the 'Q' output is clocked to the phase of the two input
frequencies, it should have low spurious mixing products.

The mixer would not help in this case - the OP needs to generate
22.5KHz and has 25KHz available. But it could be useful if he had
22.5KHz or 27.5KHz signal and needed to generate the difference of
2.5KHz.

Any thoughts?

Best Regards,

Mike Monett
mrmonett@yahoo.com

1326. Re: Question on News Group protocol

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 14:43:52 UTC
From: Odd Eriksen <odderi@pvv.ntnu.no>
Message-ID: <a4du37mie1@tyfon.itea.ntnu.no>
Source record: 46368

JLB <jim.bolinger@lintek.aeroflex.com> wrote:
> Should replys to a post be placed at the beginning or end of the
> original post?

-Common netiquette is to always put your comments below the original post.
However, more than one good flamewar has come out of discussions regarding
this practice... :-)

--
73 de LC8MAT

Odd Erling, ARK

Sleep: A completely inadequate substitute for caffeine.

1327. Re: """""" Looking for Software""""""""

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 14:57:53 UTC
From: Bruce Lane <spammers@buzz.off>
Message-ID: <MPG.16d41ecb3e1663d89897cb@news.drizzle.com>
Source record: 46369

In article <MPG.16d39fa1be49dee398968e@news.easynews.com>,
drbadboy@hoymail.com says...

> Plez Help
> Im looking for a program that I can use to design my own type of antennas
> from directional to omidirectional for different Frequency ranges of my

<snip>

Computer programs can only do so much. Improving your knowledge of
antenna theory and practice will give you an edge in that you'll know not
only how to -really- use whatever software tools you end up with (most
assume a certain level of knowledge of electromagnetic theory and basic
physics), but you'll also have a better change to catch any errors they
may produce as a result of bad input.

The ARRL's 'Antenna Book' contains a wealth of information. Note
that a scientific or graphing calculator would likely be helpful in
dealing with some of the number crunching.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

1328. EI9GQ homebrew radio page,

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 15:47:44 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <0r1e4a.vbv.ln@my.linux.box>
Source record: 46373
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur,uk.radio.amateur

```
EI9GQ homebrew radio page.

Recent update.
Frequency display and VFO stabiliser.
HF transcever. New IF and AGC modules.

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17
```

1329. Re: Question on News Group protocol

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 17:03:33 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C6A9C65.30C77BA0@clifto.com>
Source record: 46370

JLB wrote:
> Should replys to a post be placed at the beginning or end of the
> original post?

The end. Sort of. See <http://www.geocities.com/nnqweb/nquote.html>.
Quotes are supposed to provide context; context doesn't follow a thought,
it precedes the thought. Top-posting is like having a conversation in
reverse.

"Yeah, take it easy."
"Well, see ya soon."
"Great!"
"Ten thousand a year."
"How much?"
"Got a really big raise this time."
"Sorry to hear it. How's the job?"
"She's not feeling well. Flu, I think."
"Same as ever. How's yours?"
"How's your wife?"
"They painted her purple. Yuck."
"Good. Did you hear what Martin and Sheila did to the Sea Breeze?"
"Good, and you?"
"Bill! How the heck are you?"

--
Britney Spears' Guide to Semiconductor Physics
<http://britneyspears.ac/lasers.htm>

1330. FS: HP-204B Sig Gen

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 18:09:03 UTC
From: Walter Treftz <penguino@atlantic.net>
Message-ID: <3C6AABBE.FA67154E@atlantic.net>
Source record: 46371

SELL: H.P. 204B Oscillator (AF/RF)

Range: 4 hz to 570 khz
Output: 10 mw, 600-ohm (dual banana plugs and BNC)
Size: 6"h x 5"w x 8"d

Comes with spare 10K-ohm large WW pot (main freq
control).

$30.00 plus postage.

Walter Treftz (N4GL)
3840 Laguna Loop
Hernando, FL 34442
(352) 637-1755
--- hvalver@hotmail.com ---
--- penguino@atlantic.net ---

1331. Sound Card question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 18:19:04 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0202131019.4afedaf1@posting.google.com>
Source record: 46372

Almost everyone, it seems, has a PC, particularly if you are already into electronics.

Every PC has a sound card.

A lot of neat stuff is being done with them these days, but most of what I see only uses one channel.

A lot more neat stuff could be done if both channels (left and right) were used.

My question is, are the left and right channels sampled simultaneously, thereby maintaining their phase relationship? A phase difference would still be usable, so long as it is constant, for what I have in mind.

This would be easy to test with a simple experiment. Hook up an audio signal to both left and right channels. Record it. Play it back and look at the left and right outputs with an oscilloscope. They should be identical in both amplitude and phase, assuming all the soundcard controls are set properly.

Perhaps I will try this when I get a chance

Has anyone already done this, or already know the answer to the question?

Jim
N8EE

1332. Re: Question on News Group protocol

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 19:18:24 UTC
From: mcalhoun@ksu.edu
Message-ID: <a4ee60$4p@unix1.cc.ksu.edu>
Source record: 46375

Odd Eriksen <odderi@pvv.ntnu.no> writes:
>JLB <jim.bolinger@lintek.aeroflex.com> wrote:
>> Should replys to a post be placed at the beginning or end of the
>> original post?

>-Common netiquette is to always put your comments below the original post.
>....[snip]....

However, one does NOT need to include the ENTIRE original post!

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

1333. FS: Vintage Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 19:19:06 UTC
From: Walter Treftz <penguino@atlantic.net>
Message-ID: <3C6ABC29.7FADF514@atlantic.net>
Source record: 46374

SELL: VINTAGE TUBES

Type: Mfr: Qty: Remarks:

966A United 3 ea Engraved base

866jr Taylor 2 ea Porcelin base

TZ40 Taylor 1 ea

82 RCA 1 ea

810 RCA (JAN) Pull: 1 ea, NIB: 3 ea

If interested, make reasonable offer. Digital pix
avail. Postage extra. No charge for packing and
taking to UPS/PO.

Walter Treftz (N4GL)
(352) 637-1755
3840 Laguna Loop
Hernando, FL 34442
--- hvalver@hotmail.com ---

1334. Re: 100kHz to 22.5kHz conversion - will it have jitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 21:24:08 UTC
From: k7itm@aol.com
Message-ID: <3200347.0202131324.30bf7e57@posting.google.com>
Source record: 46376

Hi Jan-Martin,

OK, one nice thing you can do is multiply by 3, and do it twice. An advantage of that is you can go from 50kHz to 150kHz with a balanced circuit which has very low 100kHz and 200kHz (and all even harmonics) output, and that makes it easier to filter; then multiply that up to 450, with the second times 3. Of course, your 50kHz square wave is already rich in odd harmonics, and you can even just pass that through a pretty good 450kHz filter and probably get a decent result. You could also mix 500kHz and 50kHz to get the 450 (and 550). If you did that, you wouldn't have to worry so much about the 350kHz and other signals, perhaps, and you could put a "zero" on the 550kHz, to really knock it down. I don't know what the ultimate attenuation of the little ceramic filters is, but if you only have one other major signal (like 550kHz) to kill, then a notch to remove it should do the trick.

If you go to http://www.wenzel.com/, you should be able to find some interesting ideas for simple multiplier and divider circuits.

Hope this helps...sounds like there are lots of possible ways to do the job, but what works best for you will probably depend on what you have around to work with. I'd probably go for more digital division, if it made the mixing or multiplying easier, just because it's easy (for me) to put lots of division into a CPLD. But I've also put most of a PLL into a CPLD, and doing it that way would have some appeal too...maybe a 9MHz VCXO, phase locked to the 10MHz ref, and then divided down. I think it would all fit into one 74AC04 and a CPLD, supported by a crystal, a loop filter (maybe with an op amp), and a very few other passive parts. If it didn't have to be locked to the 10MHz ref, that makes it even easier, of course, but I gather that's part of the requirement.

Cheers,
Tom

la8ak.xnd@online.no (J M Noeding) wrote in message
news:<3c69b0e6.82449394@news.online.no>...
> On 12 Feb 2002 14:38:03 -0800, K7ITM@aol.com (Tom Bruhns) wrote:
>
> >Well, since tuned circuit for 25kHz, and especially for 2.5kHz, might
> >be a bit awkward (though you could use active filters...), how about
> >using your existing 10MHz and presumably you have 1MHz, and mix them.
> >Select the 9MHz difference, and divide that (by 400--very easy to do)
> >to get the 22.5kHz. You could also do it with a PLL running the phase
> >detector at 2.5kHz, I suppose (or higher, and divide down to 22.5kHz).
> > Lots of possible ways, but as you note, you'd like a 22.5kHz that is

> >clean (except for harmonics).
> >Cheers,
> >Tom
> >
>
> Hi Tom!
>
> one of the only solutions I can see to avoid jitter is to use a x9
> multiplier - with simple 9MHz xtal filter and divide down to 22.5kHz,
> but it is a waste to use this divider from 9MHz down to 22.5kHz.
>
> Another suggestion is to use 50kHz signal with a x9 multiplier to
> 450kHz - easy to find 455kHz LC-type IF-filters.
> 100kHz leakage may be a problem(?)
>
> Have you a good suggestion for a harmonic generator?
>
> 73
> Jan-Martin
> LA8AK

1335. Re: Mobile Radio Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 21:40:16 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0202131340.2dde8798@posting.google.com>
Source record: 46377
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equiptment

r9c9nixon@mi9nd9spring.com (Russell C. Nixon) wrote in message I would like to use the Anderson Power Poles, but
> the RS parts are probably more readily available and have been
> standardized.

Dunno, the Anderson connectors have been around a long time, and also are very standardized. Myself, I wouldn't use anything but anderson connectors. I haven't seen the radio shack versions, but I'm almost sure they have to be micky mouse compared to the anderson connector. I've been using the andersons for about 15 years, and have never had one break yet, and have never had one be a point of excess resistance in the line. Thats important to me because I run 20 amp hf rigs. They have siver plated contacts, ands they are flat and wide. They also lock real tight and can only go the right way. You'll never fry a rig going backwards. And any connector will plug to any other, being there is no male/female pairs to deal with. I'm still using the first one I ever used, although it is starting to crack slightly on the plastic flanges. It's probably been plugged/unplugged about 926 times and 15 years of camping abuse. Still works fine. For a ham radio, they are so overkill, you never have problems. I use the one piece gray versions rated 600v at 50 amps. The last batch I bought I got at "on-line electronics.inc" at (714)847-5111. The part # was 6319. I've also seen them at graingers. Their website is http://www.andersonpower.com/ . I normally don't push commercial products, but I swear by these things. Every piece of gear I have that runs off 12v of any current uses them. I can even jump start my car thru them when I have my 2nd deep cycle behind me, and don't even have to get out of the car. I unhook the hf rig, and plug the 2nd battery onto the power line to the battery. Try jumping your car on a radio shack connector. I bet it gets warm. :(
MK

1336. Re: Sound Card question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 21:44:52 UTC
From: James <james.fenech@remove.nec.com.au>
Message-ID: <3C6ADE0D.6080505@remove.nec.com.au>
Source record: 46378

Hi Jim,

If you record both channels simultaneously, and then play them back, the phase will be correct. I would guess that if only one ADC/DAC were used, the interleaving would be identical and cancell the phase error. A better test would be to record with both channels and look at the digital samples, then any difference would be more obvious.

I have experimented with using two sound cards so I could input and output at the same (real) time. New cards allow this but my old sound card didn't. It also allows outputting at a different rate.

If you are using this with a radio (as the NG might suggest), your biggest problem is keeping EMC out of the radio. With my old PC, I just couldn't keep it out, I'll be trying a new case sometime soon. The biggest offender does appear to be the monitor though - but I just switch it off when it isn't needed.

James.

JLB wrote:

> Almost everyone, it seems, has a PC, particularly if you are already
> into electronics.
>
> Every PC has a sound card.
>
> A lot of neat stuff is being done with them these days, but most of
> what I see only uses one channel.
>
> A lot more neat stuff could be done if both channels (left and right)
> were used.
>
> My question is, are the left and right channels sampled
> simultaneously, thereby maintaining their phase relationship? A phase
> difference would still be usable, so long as it is constant, for what
> I have in mind.
>
> This would be easy to test with a simple experiment. Hook up an audio
> signal to both left and right channels. Record it. Play it back and
> look at the left and right outputs with an oscilloscope. They should
> be identical in both amplitude and phase, assuming all the soundcard
> controls are set properly.
>
> Perhaps I will try this when I get a chance
>

> Has anyone already done this, or already know the answer to the
> question?
>
> Jim
> N8EE
>

1337. Re: Mobile Radio Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 21:56:51 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C6AE123.7E49AD4D@eznec.com>
Source record: 46379
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equiptment

I use the small Anderson connectors and have had quite a few break, with
only very occasional use. But the broken plastic shell is easily
replaced, and they usually break in such a way that they're still
usable. If I needed real reliability and wasn't concerned about
interhangeability with other people's equipment, I'd use bigger ones
just for the thicker plastic. But the small ones have been adopted as
the standard in this area.

Roy Lewallen, W7EL

Mark Keith wrote:
>
> r9c9nixon@mi9nd9spring.com (Russell C. Nixon) wrote in message I would like to use the
Anderson Power Poles, but
> > the RS parts are probably more readily available and have been
> > standardized.
>
> Dunno, the Anderson connectors have been around a long time, and also
> are very standardized. Myself, I wouldn't use anything but anderson
> connectors. I haven't seen the radio shack versions, but I'm almost
> sure they have to be micky mouse compared to the anderson connector.
> I've been using the andersons for about 15 years, and have never had
> one break yet, and have never had one be a point of excess resistance
> in the line. Thats important to me because I run 20 amp hf rigs. They
> have siver plated contacts, ands they are flat and wide. They also
> lock real tight and can only go the right way. You'll never fry a rig
> going backwards. And any connector will plug to any other, being there
> is no male/female pairs to deal with. I'm still using the first one I
> ever used, although it is starting to crack slightly on the plastic
> flanges. It's probably been plugged/unplugged about 926 times and 15
> years of camping abuse. Still works fine. For a ham radio, they are so
> overkill, you never have problems. I use the one piece gray versions
> rated 600v at 50 amps. The last batch I bought I got at "on-line
> electronics.inc" at (714)847-5111. The part # was 6319. I've also seen
> them at graingers. Their website is http://www.andersonpower.com/ . I
> normally don't push commercial products, but I swear by these things.
> Every piece of gear I have that runs off 12v of any current uses them.
> I can even jump start my car thru them when I have my 2nd deep cycle
> behind me, and don't even have to get out of the car. I unhook the hf
> rig, and plug the 2nd battery onto the power line to the battery. Try
> jumping your car on a radio shack connector. I bet it gets warm. :(
> MK

1338. Another landmark eQSL acceptance!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-13 23:49:15 UTC
From: Charles Johnston <ctj92@cableone.net>
Message-ID: <3c6afb7a$1@news.bnb-lp.com>
Source record: 46380
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

Chalk-up another acceptance for eQSL's......

Confirmation was received today from the president-elect of the
3905 Century Club that their awards program will accept hard copies
of eQSL's as confirmation. The hard copy can be printed by the
recipient on his home computer if desired, or you can use eQSL's service
to have them printed and mailed to you.

Either is OK for Century Club awards.
---
info retrieved from eQSL Discussion email list as posted there by
David, KC0JB

--

73 / DX

Charles T Johnston
Prescott, Arizona - U.S.A.
charles@ab7sl.com

AB7SL - Ham Radio Pages
Official W9INN Antennas Page
www.ab7sl.com

1339. wideband transformer design rule

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 04:51:55 UTC
From: Chuck Hutton <chutton1@qwest.net>
Message-ID: <k7Ja8.379$TL.315912@news.uswest.net>
Source record: 46382

I've looked through the books I have and don't see any explanation of the old rule of thumb that the inductive reactance of a balun or wideband transformer should be at least 4 times the antenna impedance.

I've tried to come up with a reason to explain the rule but it's not coming. Anybody have some info?

Chuck

1340. Re: HP Oscillator from an HP5245L counter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 05:04:14 UTC
From: Rick Karlquist <richard@karlquist.removethis.com>
Message-ID: <izHa8.7607$kt5.15510@rwcrnsc52.ops.asp.att.net>
Source record: 46381
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

It depends on what you mean by "really good". The 10544 was
superceded by the 10811 nearly 25 years ago. The 10811 is
a much better design than the 10544. In the meantime, the rest
of the oscillator industry has caught up or surpassed even the
10811. Agilent recognized this last year and closed their crystal
fab. Considering that there are boatloads of 10811's floating around,
I sure wouldn't put a lot of effort into getting a 10544 going. OTOH,
since the two are form, fit, and function interchangeable, if you
have a 10544 socket, you can always plug in a 10811 if you
come into possession of one.

Rick Karlquist

"Tracy" <thooker@psl.nmsu.edu> wrote in message
news:a4c7eg$l0a$1@bubba.NMSU.Edu...
>
> My real goal is to get a really good 10 MHz standard for my workshop. It
> sounds like it would be a lot easier to get an old HP5245M with the hi
> stability oscillator and just use it.
>
> BTW, the oscillator I have looks just like the one in the picture, except
> the p/n is 10544-60036.

1341. Re: HP Oscillator from an HP5245L counter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 07:21:09 UTC
From: Rex <notreally@hotmail.com>
Message-ID: <u9pm6ucg0m0t6sfhsc6rja1lum18mf0se8@4ax.com>
Source record: 46383
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Thu, 14 Feb 2002 05:04:14 GMT, "Rick Karlquist"
<richard@karlquist.removethis.com> wrote:

>OTOH,
>since the two are form, fit, and function interchangeable, if you
>have a 10544 socket, you can always plug in a 10811 if you
>come into possession of one.
>
>Rick Karlquist

Rick,
His 10544 seems to have a 1 MHz output. Do you have any idea how
this could be? I sent him a picture of a 10544 and he says it looks
like what he has.

-Rex
[rexa -TheAtSign- Next4dnaiLetters -period- (UsualComEnd)]< my_eemale_addy

1342. Re: Mobile Radio Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 08:36:16 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0202140036.71b27ff7@posting.google.com>
Source record: 46385
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equiptment

Roy Lewallen <w7el@eznec.com> wrote in message news:<3C6AE123.7E49AD4D@eznec.com>...
> I use the small Anderson connectors and have had quite a few break, with
> only very occasional use. But the broken plastic shell is easily
> replaced, and they usually break in such a way that they're still
> usable. If I needed real reliability and wasn't concerned about
> interhangeability with other people's equipment, I'd use bigger ones
> just for the thicker plastic. But the small ones have been adopted as
> the standard in this area.
>
> Roy Lewallen, W7EL

I'm not sure, but I think the "break apart" black/red versions may be
less brittle as far as the plastic. A friend of mine got those instead
of the SB-50's I use, and it seems they may have been a bit softer
plastic. But I'd have to double check on that. I prefer the one piece
because it keeps my cables neater without two ends flopping around.
Yep, the ones I use are the "puny" anderson connectors. I'm sure the
bigger ones are stronger being they are bigger. But breakage hasn't
really been a problem here so far. It took over ten years for my first
one to start to crack on the flanges. I just wrapped tape around it to
keep it from breaking totally...I've got a couple of spare new plastic
shells when it finally breaks. MK

1343. Re: wideband transformer design rule

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 08:37:06 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C6B7732.3BB04E8B@eznec.com>
Source record: 46384

In the case of a broadband transformer, connecting a winding across two conductors puts an impedance across the two conductors. This impedance is equal to the winding impedance. The lower this impedance is, the more it disturbs the circuit it's put across. So it's desirable to have a high winding impedance. The level you can tolerate depends entirely on the circuit you're putting it across -- a factor of four, five, or ten is sometimes used as a rule of thumb, as an amount that causes an acceptably small amount of disturbance for most purposes.

In the case of a 1:1 current balun, the winding impedance determines how effectively the common mode current is choked. The winding impedance is in series with the path taken by the common mode current you're trying to reduce, so the higher the winding impedance, the more effective the balun.

There's no reason that the inductive reactance has to be high. Unless you're running enough power to cause objectionable heating, it's usually necessary only to get the magnitude of the impedance adequately high. The widest band transformers have a winding impedance that's essentially resistive over most of the operation range, and have a relatively small amount of series reactance. Likewise, the broadest band baluns have a resistive winding impedance.

It usually doesn't hurt to make a resistive winding impedance higher than necessary, although the effort is wasted. If the winding impedance is primarily inductive, though, a higher impedance can sometimes lead to resonances too close to the operating frequency, or for example at VHF when using the transformer at HF. So it's not good practice to make the impedance a whole lot higher than necessary.

Roy Lewallen, W7EL

Chuck Hutton wrote:
>
> I've looked through the books I have and don't see any explanation of the
> old rule of thumb that the inductive reactance of a balun or wideband
> transformer should be at least 4 times the antenna impedance.
>
> I've tried to come up with a reason to explain the rule but it's not coming.
> Anybody have some info?
>
> Chuck

1344. Re: Sound Card question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 09:04:02 UTC
From: kdgreen <kdgreen@optushome.com.au>
Message-ID: <3c6b7ceb$0$18472$afc38c87@news.optusnet.com.au>
Source record: 46386

Hope this isn't a silly question!

Is there a good starting point for programming soundblaster cards - i.e. how do you sample an incoming signal? memory addresses? control registers, etc. I've been using a AD Ez-kit Lite for which I've found much more information but at higher cost and lower portability.

regards .. David
VK3DGN

"James" <james.fenech@remove.nec.com.au> wrote in message news:3C6ADE0D.6080505@remove.nec.com.au...
> Hi Jim,
>
> If you record both channels simultaneously, and then play them back, the
> phase will be correct. I would guess that if only one ADC/DAC were used,
> the interleaving would be identical and cancell the phase error. A
> better test would be to record with both channels and look at the
> digital samples, then any difference would be more obvious.
>
> I have experimented with using two sound cards so I could input and
> output at the same (real) time. New cards allow this but my old sound
> card didn't. It also allows outputting at a different rate.
>
> If you are using this with a radio (as the NG might suggest), your
> biggest problem is keeping EMC out of the radio. With my old PC, I just
> couldn't keep it out, I'll be trying a new case sometime soon. The
> biggest offender does appear to be the monitor though - but I just
> switch it off when it isn't needed.
>
> James.
>
> JLB wrote:
>
> > Almost everyone, it seems, has a PC, particularly if you are already
> > into electronics.
> >
> > Every PC has a sound card.
> >
> > A lot of neat stuff is being done with them these days, but most of
> > what I see only uses one channel.
> >
> > A lot more neat stuff could be done if both channels (left and right)
> > were used.
> >

> > My question is, are the left and right channels sampled
> > simultaneously, thereby maintaining their phase relationship? A phase
> > difference would still be usable, so long as it is constant, for what
> > I have in mind.
> >
> > This would be easy to test with a simple experiment. Hook up an audio
> > signal to both left and right channels. Record it. Play it back and
> > look at the left and right outputs with an oscilloscope. They should
> > be identical in both amplitude and phase, assuming all the soundcard
> > controls are set properly.
> >
> > Perhaps I will try this when I get a chance
> >
> > Has anyone already done this, or already know the answer to the
> > question?
> >
> > Jim
> > N8EE
> >
>

1345. Re: Mobile Radio Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 09:36:04 UTC
From: "Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net>
Message-ID: <21AAB62529032FEA.D8304A0E9A1011BA.71DAC521EF0B13FF@lp.airnews.net>
Source record: 46387
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equiptment

On Wed, 13 Feb 2002 13:56:51 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>I use the small Anderson connectors and have had quite a few break, with
>only very occasional use. But the broken plastic shell is easily
>replaced, and they usually break in such a way that they're still
>usable. If I needed real reliability and wasn't concerned about
>interhangeability with other people's equipment, I'd use bigger ones
>just for the thicker plastic. But the small ones have been adopted as
>the standard in this area.

Why not use thie bigger ones for yourself, and make a couple of
adapters for the smaller ones?

IMO, what we need to find is a standard that will allow both simple
connection and disconnection, and easily discerning the source
capability/draw requirements, while still allowing a high current
source to power a low current item, but not allow connection of a low
current source to a high current item.

The only thing I could see working at this point would be to set it up
with multiple PowerPole units; for example, the regular pair for a
draw (or source) of 5A or less, for a draw of 5-15A, three shells,
with only the outer two live, (maybe with a different color for the
'dead' shells, to make it more obvious) and for higher draw, four
shells, again with only the outer two active. Sources would be
similar; a 5A source bets two shells, a 5-15A source gets three, with
one ground and two hot, (allowing the 5A load to be connected to it as
well as the 5-15A) and a >15A source gets four shells, with one ground
and three hot, so that all of the loads can plug into it.

The above would make it impossible to plug your 12A three-shell mobile
rig into your 5A, two-shell lighter plug adapter, (well, it would plug
in, but not complete the circuit) while allowing you to run your 250mA
two-shell HT off the mobile's four-shell source wiring. That's as
foolproof as I can think of, though I don't doubt for a second that
there are plenty of fools just waiting to screw it up.

Joe Bramblett, KD5NRH
kd5nrh@kd5nrh.net
http://www.kd5nrh.net

1346. Re: Sound Card question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 09:36:41 UTC
From: John Hague <John.Hague@philips.com>
Message-ID: <3C6B8529.49CA7DB9@philips.com>
Source record: 46388

kdgreen wrote:

> Hope this isn't a silly question!
>
> Is there a good starting point for programming soundblaster cards - i.e. how
> do you sample an incoming signal? memory addresses? control registers, etc.
> I've been using a AD Ez-kit Lite for which I've found much more information
> but at higher cost and lower portability.
>
> regards .. David
> VK3DGN
>
> "James" <james.fenech@remove.nec.com.au> wrote in message
> news:3C6ADE0D.6080505@remove.nec.com.au...
> > Hi Jim,
> >
> > If you record both channels simultaneously, and then play them back, the
> > phase will be correct. I would guess that if only one ADC/DAC were used,
> > the interleaving would be identical and cancell the phase error. A
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> >
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> > card didn't. It also allows outputting at a different rate.
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> > If you are using this with a radio (as the NG might suggest), your
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> > switch it off when it isn't needed.
> >
> > James.
> >
> > JLB wrote:
> >
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> > > into electronics.
> > >
> > > Every PC has a sound card.
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> > > A lot of neat stuff is being done with them these days, but most of
> > > what I see only uses one channel.
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> > > A lot more neat stuff could be done if both channels (left and right)
> > > were used.
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> > > My question is, are the left and right channels sampled
> > > simultaneously, thereby maintaining their phase relationship? A phase
> > > difference would still be usable, so long as it is constant, for what
> > > I have in mind.
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> > > This would be easy to test with a simple experiment. Hook up an audio
> > > signal to both left and right channels. Record it. Play it back and
> > > look at the left and right outputs with an oscilloscope. They should
> > > be identical in both amplitude and phase, assuming all the soundcard
> > > controls are set properly.
> > >
> > > Perhaps I will try this when I get a chance
> > >
> > > Has anyone already done this, or already know the answer to the
> > > question?
> > >
> > > Jim
> > > N8EE
> > >
> >

David

I've found this site to be good:

http://www.relisoft.com/freeware/recorder.html

It gives a tutorial in C++ on how to sample sounds using Win32.

Hope this is of some help.

Regards

John, G4GOY

1347. Re: wideband transformer design rule

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 11:50:04 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a4g8uf$1g1u$1@ID-124126.news.dfncis.de>
Source record: 46389

It is merely a question of the low-frequency response of ANY transformer.

At the frequency where winding reactance equals load resistance the response
is 3dB down on mid-frequencies.

Down to frequencies where reactance is 4 times load resistance the response
for most practical purposes can be considered flat. The magnetising current
is only 1/4 of current into the load and the frequency response is only
about 0.1 or 0.2 dB down on mid-frequencies.

Actual LF response depends on generator impedance and is easily calculated.
But why bother ? The thumb rule is usually good enough.

****
Regards, Reg G4FGQ
Free Radio Modelling Software
Http://www.g4fgq.com
****

==========
Chuck Hutton <chutton1@qwest.net> wrote in message
news:k7Ja8.379$TL.315912@news.uswest.net...
> I've looked through the books I have and don't see any explanation of the
> old rule of thumb that the inductive reactance of a balun or wideband
> transformer should be at least 4 times the antenna impedance.
>
> I've tried to come up with a reason to explain the rule but it's not
coming.
> Anybody have some info?
>
>
> Chuck
>
>
>

1348. Re: Another landmark eQSL acceptance!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 11:51:07 UTC
From: KC8JBO <kc8jbo@alt.net>
Message-ID: <a4g9qfsqp0@pita.alt.net>
Source record: 46390
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

"Charles Johnston" <ctj92@cableone.net> wrote in message
news:3c6afb7a$1@news.bnb-lp.com...
> Chalk-up another acceptance for eQSL's......
>
> ------------
> Confirmation was received today from the president-elect of the
> 3905 Century Club that their awards program will accept hard copies
> of eQSL's as confirmation. The hard copy can be printed by the
> recipient on his home computer if desired, or you can use eQSL's service
> to have them printed and mailed to you.
>
> Either is OK for Century Club awards.
> ----------
> info retrieved from eQSL Discussion email list as posted there by
> David, KC0JB
>
>
> --
>
> 73 / DX
>
> Charles T Johnston
> Prescott, Arizona - U.S.A.
> charles@ab7sl.com
>
> AB7SL - Ham Radio Pages
> Official W9INN Antennas Page
> www.ab7sl.com

Thanks for that info.

1349. Re: Sound Card question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 13:00:11 UTC
From: deyoreo@re.ray.com
Message-ID: <3c6bb4be.3537234@proxy.res.ray.com>
Source record: 46391

try this page for C++ code for soundcards:
http://sdeyoreo.tripod.com/sdeyoreo/id5.html
On 13 Feb 2002 10:19:04 -0800, jim.bolinger@lintek.aeroflex.com (JLB)
wrote:

>Almost everyone, it seems, has a PC, particularly if you are already
>into electronics.
>
>Every PC has a sound card.
>
>A lot of neat stuff is being done with them these days, but most of
>what I see only uses one channel.
>
>A lot more neat stuff could be done if both channels (left and right)
>were used.
>
>My question is, are the left and right channels sampled
>simultaneously, thereby maintaining their phase relationship? A phase
>difference would still be usable, so long as it is constant, for what
>I have in mind.
>
>This would be easy to test with a simple experiment. Hook up an audio
>signal to both left and right channels. Record it. Play it back and
>look at the left and right outputs with an oscilloscope. They should
>be identical in both amplitude and phase, assuming all the soundcard
>controls are set properly.
>
>Perhaps I will try this when I get a chance
>
>Has anyone already done this, or already know the answer to the
>question?
>
>Jim
>N8EE

1350. Power Transformer current rating?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 13:07:07 UTC
From: Frank Worm <fworm@norpak.ca>
Message-ID: <3C6BB6A2.A431225F@norpak.ca>
Source record: 46392

Hello All
I have a Hammond class a power transformer.
It's spec's are:
115V AC in
18V AC out
270VA

How many amps can this xformer provide?
Thanks in advance
Regards
Frank

1351. Re: Sound Card question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 13:14:03 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0202140514.3528625f@posting.google.com>
Source record: 46393

I get paid here for doing fun things with computers, A/D converters,
and signal generators. Most homebrewers couldn't afford the $1M price
tag on the stuff we build, though. Besides, the lowest we go is 30
MHz.

However, there are DDS chips, minicircuit devices, and PCs with sound
cards---all very cheap. Think of the possibilities.

Jim
N8EE

James <james.fenech@remove.nec.com.au> wrote in message
news:<3C6ADE0D.6080505@remove.nec.com.au>...
> Hi Jim,
>
> If you record both channels simultaneously, and then play them back, the
> phase will be correct. I would guess that if only one ADC/DAC were used,
> the interleaving would be identical and cancell the phase error. A
> better test would be to record with both channels and look at the
> digital samples, then any difference would be more obvious.
>
> I have experimented with using two sound cards so I could input and
> output at the same (real) time. New cards allow this but my old sound
> card didn't. It also allows outputting at a different rate.
>
> If you are using this with a radio (as the NG might suggest), your
> biggest problem is keeping EMC out of the radio. With my old PC, I just
> couldn't keep it out, I'll be trying a new case sometime soon. The
> biggest offender does appear to be the monitor though - but I just
> switch it off when it isn't needed.
>
> James.
>
> JLB wrote:
>
> > Almost everyone, it seems, has a PC, particularly if you are already
> > into electronics.
> >
> > Every PC has a sound card.
> >
> > A lot of neat stuff is being done with them these days, but most of
> > what I see only uses one channel.
> >
> > A lot more neat stuff could be done if both channels (left and right)
> > were used.

> >
> > My question is, are the left and right channels sampled
> > simultaneously, thereby maintaining their phase relationship? A phase
> > difference would still be usable, so long as it is constant, for what
> > I have in mind.
> >
> > This would be easy to test with a simple experiment. Hook up an audio
> > signal to both left and right channels. Record it. Play it back and
> > look at the left and right outputs with an oscilloscope. They should
> > be identical in both amplitude and phase, assuming all the soundcard
> > controls are set properly.
> >
> > Perhaps I will try this when I get a chance
> >
> > Has anyone already done this, or already know the answer to the
> > question?
> >
> > Jim
> > N8EE
> >

1352. Re: Power Transformer current rating?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 13:39:22 UTC
From: w4pqwhs@aol.com
Message-ID: <20020214083922.07720.00000013@mb-fv.aol.com>
Source record: 46394

>I have a Hammond class a power transformer.
>It's spec's are:
>115V AC in
>18V AC out
>270VA
>
>How many amps can this xformer provide?

Frank you have a 15 amp transformer,would make a nice 13V power supply..270VA divided by 18V = 15A..Good luck Harold W4PQW

1353. Re: Power Transformer current rating?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 13:43:19 UTC
From: brokebob@aol.com
Message-ID: <20020214084319.27310.00001200@mb-mj.aol.com>
Source record: 46395

Approximately 15 amps. 270 VA equates to 270 watts. P = I * E so I = P/E or 270/18.
brokebob@aol.com (broke=not working, retired=not working, retired=broke)

1354. Re: Power Transformer current rating?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 13:45:28 UTC
From: Frank Worm <fworm@norpak.ca>
Message-ID: <3C6BBF9E.1CB002AF@norpak.ca>
Source record: 46396

Thank you for your reply.
That's what I figured.
Had to double check the VA thing and it seems I was right
270VA divided by 18V
Thanks a bunch
Regards
Frank

W4pqw HS wrote:

> >I have a Hammond class a power transformer.
> >It's spec's are:
> >115V AC in
> >18V AC out
> >270VA
> >
> >How many amps can this xformer provide?
>
> Frank you have a 15 amp transformer,would make a nice 13V power supply..270VA
> divided by 18V = 15A..Good luck Harold W4PQW

1355. Re: Question on News Group protocol

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 13:57:42 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0202140557.619d71dd@posting.google.com>
Source record: 46297

I have seen a lot of both.

Jim
N8EE

<snip>
> The end. Sort of. See <http://www.geocities.com/nnqweb/nquote.html>.
> Quotes are supposed to provide context; context doesn't follow a thought,
> it precedes the thought. Top-posting is like having a conversation in
> reverse.
>

I have seen a lot of both.

Jim
N8EE

;-)

1356. Re: HP Oscillator from an HP5245L counter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 15:50:59 UTC
From: Rick Karlquist <richard@karlquist.removethis.com>
Message-ID: <D1Ra8.59159$AV5.334192@rwcrnsc51.ops.asp.att.net>
Source record: 46298
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Is he measuring the 1 MHz out directly at the oscillator pin? Or
after the signal has passed through to the output connector?
Regarding photos of a 10544: the 10544 and 10811 look identical.
I believe there may have been predessors to the 10544 that also
had the same packaging. I have only been with HP/Agilent since
1979, when the 10544 was just going out of production. I think
the 5245 was discontinued in the early 1980's. I remember they
had a big celebration (?) about it.

In any event, if his oscillator is truly 1MHz, I wouldn't expect
much in the way of performance from it, whatever its model
number is. Again, considering that something like 1/4 million
10811's have been made, it should be easy enough to get one of
those.

Rick Karlquist N6RK

"Rex" <notreally@hotmail.com> wrote in message
news:u9pm6ucg0m0t6sfhsc6rja1lum18mf0se8@4ax.com...
> On Thu, 14 Feb 2002 05:04:14 GMT, "Rick Karlquist"
> <richard@karlquist.removethis.com> wrote:
>
> >OTOH,
> >since the two are form, fit, and function interchangeable, if you
> >have a 10544 socket, you can always plug in a 10811 if you
> >come into possession of one.
> >
> >Rick Karlquist
>
> Rick,
> His 10544 seems to have a 1 MHz output. Do you have any idea how
> this could be? I sent him a picture of a 10544 and he says it looks
> like what he has.
>
> -Rex
> [rexa -TheAtSign- Next4dnaiLetters -period- (UsualComEnd)]<
my_eemale_addy

1357. Re: Question on News Group protocol

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 15:54:43 UTC
From: -Your Friend Bill- <none@coqui.net>
Message-ID: <3C6BDDC3.EE486CE6@coqui.net>
Source record: 46299

In actual practice it really makes a mess if the replies to a thread are
going on top and somebody posts at the bottom. Not to mention if the
intent is to intersperse comments into a long post that has multiple
'subjects'. I guess you have to be a bit flexible and wear your net
etiquette hat backwards sometimes if you want to be understood.
-Bill WX4A

JLB wrote:
>
> I have seen a lot of both.
>
> Jim
> N8EE
>
> <snip>
> > The end. Sort of. See <http://www.geocities.com/nnqweb/nquote.html>.
> > Quotes are supposed to provide context; context doesn't follow a thought,
> > it precedes the thought. Top-posting is like having a conversation in
> > reverse.
> >
>
> I have seen a lot of both.
>
> Jim
> N8EE
>
> ;-)

In actual practice it really makes a mess if the replies to a thread are
going on top and somebody posts at the bottom. Not to mention if the
intent is to intersperse comments into a long post that has multiple
'subjects'. I guess you have to be a bit flexible and wear your net
etiquette hat backwards sometimes if you want to be understood.
-Bill WX4A

1358. Re: Sound Card question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 16:47:39 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0202140847.42a63b00@posting.google.com>
Source record: 46300

"kdgreen" <kdgreen@optushome.com.au> wrote in message
news:<3c6b7ceb$0$18472$afc38c87@news.optusnet.com.au>...

> Hope this isn't a silly question!

>

> Is there a good starting point for programming soundblaster cards - i.e. how

> do you sample an incoming signal? memory addresses? control registers, etc.

> I've been using a AD Ez-kit Lite for which I've found much more information

> but at higher cost and lower portability.

This is entirely operating system dependent.
Depending on this OS, this is either ridiculously
easy, or somewhat difficult.

The setup used by Linux is one of the simpler ones
out there: the sound card is /dev/dsp (if you
only have one), and you read and write to it like
any other stream device.

Laura Halliday VE7LDH "Que les nuages soient notre
Grid: CN89lg pied a terre..."
ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

1359. Re: Tube type Electronic TR Switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 18:24:02 UTC
From: David E Allen <davea@mse13.cos.agilent.com>
Message-ID: <1013711042.534616@goodnews.cos.agilent.com>
Source record: 46301

John_in_NJ <mankind@aol.com> wrote:
: Does anyone have the ARRL Hints & Kinks book from 1968 or 1969 ? I need the
: schematic for the electronic T/R switch. I build one back in the 70s and it
: worked great for QSK operation.

If you don't mind modifying your transmitter, you can add a simple circuit
(pin diodes and fet) to the plate circuit of the output tube(s) that will
pick off a signal for your receiver. (Here I am assuming tubes - real
radios have tubes, right? :-)) Simple and works well. I also built
the tube-type T/R switch, but haven't used it in a long time.

dave allen, wb0taq, colorado springs

1360. Re: Tube type Electronic TR Switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 18:43:00 UTC
From: Gary Glaenzer <nobulltrans@irtc.net>
Message-ID: <TyTa8.464$FVt.33488986@news2.randori.com>
Source record: 46302

the tube-type TR switch is in the 64 Handbook

"David E Allen" <davea@mse13.cos.agilent.com> wrote in message
news:1013711042.534616@goodnews.cos.agilent.com...
> John_in_NJ <mankind@aol.com> wrote:
> : Does anyone have the ARRL Hints & Kinks book from 1968 or 1969 ? I need
the
> : schematic for the electronic T/R switch. I build one back in the 70s and
it
> : worked great for QSK operation.
>
> If you don't mind modifying your transmitter, you can add a simple circuit
> (pin diodes and fet) to the plate circuit of the output tube(s) that will
> pick off a signal for your receiver. (Here I am assuming tubes - real
> radios have tubes, right? :-)) Simple and works well. I also built
> the tube-type T/R switch, but haven't used it in a long time.
>
> dave allen, wb0taq, colorado springs
>

1361. VHF/UHF CATV tuners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 20:07:59 UTC
From: "john.bean1" <john.bean1@ntlworld.com>
Message-ID: <sOUa8.34774$YA2.5101869@news11-gui.server.ntli.net>
Source record: 46303

Hi to everyone

Would anyone happen to know where I can get data sheets for the above tuners, especially the ones used in NTL "cable tv boxes".

Thanks for all your help

John

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.323 / Virus Database: 180 - Release Date: 08/02/2002

1362. Re: Replacing an Icom-725 microphone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 20:10:23 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0202141210.7b988430@posting.google.com>
Source record: 46304

"gil" <gilpi@mindspring.com> wrote in message
news:<a4488l$mo5$1@slb1.atl.mindspring.net>...
> Whats a good microphone replacement for an Icom 725 other than an Icom
> mike?
> I hear most common microphones are not a good match for Icoms.
>
> Thanks in advance,
>
> Gil

You need a preamp with most mikes when used on most icoms. Any mike
can be made to run on an icom. It's not the impedance which is a
problem, it's the mike drive level. Icoms build their preamps into the
mikes. Others like kenwood build the mike preamp inside the radio. I
use an audio technica dymamic mike on my icoms. I use a preamp which
is pretty much a copy of icoms preamp they use in their desk mikes.
Heil sells these preamps for using their gold line mikes with icoms. I
just built my own. I've had to use one for years, starting with a
ic-730 and now on a 706. When I switch to my 830, I just run the
element straight to that radio. It needs no outboard preamp. MK

1363. email from ARRL - president - eqsl's and DXCC !

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 21:26:37 UTC
From: Charles Johnston <ctj92@cableone.net>
Message-ID: <3c6c2b8c$1@news.bnb-lp.com>
Source record: 46305
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

Hello interested Hams...

I have had some interesting, courteous, and informative emails with the ARRL president Jim Haynie, W5JBP concerning the recent flap about eQSL acceptance for DXCC.

Jim was also nice enough to forward to me in-house ARRL email from Bill Moore to Jim which goes a long way to further explain the likelihood of eqSL cards being accepted for DXCC as eQSL web site now states. Jim has asked me not to include the actual verbatim email from Bill..but has encouraged me to post "just the facts as Bill has laid them out" (Jim's words to me) .... and so to the best of my abilities I'll do that now....if you want to skip ahead I can tell you it still looks like eQSL cards can be and will be accepted by the ARRL as long as some important steps are taken....

Here are cut and paste excerpts from Bill's email to Jim....
---
1. It seems people have not read the entire message, especially the part that says "acting as QSL manager". On his site I see where he has OK for sending e-QSLs, not paper QSLs.In order for us to accept anything from him we would need a letter from each station he "manages" authorizing this

2. Then, we'd need something better than his word that he is verifying logs each time a request comes in (something we do not think he will be willing to do with all the stations he has logs for).

3. The requesting station must send information listing the specific QSL information then the manager must check the log for it. I believe the term for not doing this is pre-emptive QSLing.

4. As I have mentioned to all who have written, that ARRL has not changed its policy in any way regarding electronic QSLs.

---
end of cut and paste.....

--

73 / DX

Charles T Johnston
Prescott, Arizona - U.S.A.
charles@ab7sl.com

AB7SL - Ham Radio Pages
Official W9INN Antennas Page
www.ab7sl.com

1364. FS Nixie Tubes, Hivac XN3

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 22:22:37 UTC
From: fixitsan@aol.com
Message-ID: <20020214172237.24919.00000545@mb-fj.aol.com>
Source record: 46306

For all types of nixie tubes go to ..
www.ebay.co.uk
and search for 'nixie' uncheck items available in the UK

1365. Re: Replacing an Icom-725 microphone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 22:59:28 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.com>
Message-ID: <tULNcVFQFEb8EAEd@ifwtech.com>
Source record: 46308

Mark Keith wrote:
>"gil" <gilpi@mindspring.com> wrote in message
>news:<a4488l$mo5$1@slb1.atl.mindspring.net>...
>> Whats a good microphone replacement for an Icom 725 other than an Icom
>> mike?
>> I hear most common microphones are not a good match for Icoms.
>>
>You need a preamp with most mikes when used on most icoms. Any mike
>can be made to run on an icom. It's not the impedance which is a
>problem, it's the mike drive level. Icoms build their preamps into the
>mikes.
More specifically, Icom use electret microphone elements that have the
preamp built in.

>Others like kenwood build the mike preamp inside the radio.

...Because they use ordinary moving-coil (dynamic) elements with a
lower output.
>I
>use an audio technica dymamic mike on my icoms. I use a preamp which
>is pretty much a copy of icoms preamp they use in their desk mikes.
>Heil sells these preamps for using their gold line mikes with icoms. I
>just built my own. I've had to use one for years, starting with a
>ic-730 and now on a 706.

I change the microphones on all my Japanese rigs for Heil ceramic
elements because they suit my voice much better. These are a wire-in
replacement for the Yaesu and Kenwood dynamic elements.

Some Icom users have done the same (with a blocking capacitor to remove
the DC voltage) but it needs a loud voice to "talk it up" and make the
compression work. The same would be true of dynamic mic elements.

At present the alternatives seem to be:

* Continue shouting

* Use the Heil headphone/boom mic for the IC-706, which has a new
electret element that gives better speech quality - but that is not
available separately (as far as I know)

* Use one of the other Heil microphone-preamp combinations

* Build your own preamp.

I built my own, same as Mark, but based on a very simple circuit by
N4TMI in QST for June 2000. The preamp is powered from the existing Icom

supply for the electret, and there are only 7 components in total.

Details are in RadCom for October 2001, and PCB layouts are on my web site at www.ifwtech.com/g3sek/in-prac The web page is intended as a follow-up to the RadCom article which included the schematic.

I will try to get an electronic copy of the schematic for the web page, but for now you can easily figure it out from the PCB layout, which also includes the component values.

The first version was haywired inside the Icom microphone case. Then there's a conventional PCB version 0.75in x 0.8in, and an SMD version only 0.35in square. They all work fine.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.com/g3sek

1366. Re: Tube type Electronic TR Switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 23:07:35 UTC
From: la8ak.xnd@online.no
Message-ID: <3c6c3e25.249705173@news.online.no>
Source record: 46307

On Thu, 14 Feb 2002 18:24:02 +0000 (UTC), David E Allen
<davea@mse13.cos.agilent.com> wrote:

>John_in_NJ <mankind@aol.com> wrote:
>: Does anyone have the ARRL Hints & Kinks book from 1968 or 1969 ? I need the
>: schematic for the electronic T/R switch. I build one back in the 70s and it
>: worked great for QSK operation.
>
>If you don't mind modifying your transmitter, you can add a simple circuit
>(pin diodes and fet) to the plate circuit of the output tube(s) that will
>pick off a signal for your receiver. (Here I am assuming tubes - real
>radios have tubes, right? :-)

only problem is that FET source followers have very low gain, usually
-10dB when driving a 50 ohm source

73
LA8AK
--
remove ,xnd to reply

1367. ~~~ MONO-STEREO ADAPTERS/JACKS ~~~

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 23:30:10 UTC
From: Daniel Hicks <w8mmq-nospam@email.com>
Message-ID: <6MXa8.57012$fK1.4154271@rwcrnsc54>
Source record: 46309

To all,

I have recently acquired thousands of new 3.5mm mono and stereo adapters.
These are Audio Accessories model PA103, and are available for .25 cents
each, or $2.00 for a box of 10.

Great for using stereo headphones with most mono scanners.

Check out http://www.qsl.net/w8mmq/adapters.html for additional information.
Email me with any comments or questions. Detailed pictures are available at
the web site.

73 de,
Dan, W8MMQ

Remove '-nospam' to send me email

1368. Re: Tube type Electronic TR Switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-14 23:52:17 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C6C4DB1.B5B51443@eznec.com>
Source record: 46310

The reason for the low gain is the relatively high output impedance (= 1/gm) of a source follower. An N-channel FET and PNP transistor can be connected together in what's sometimes called a "bootstrap" follower to give you the high input Z of a source follower and the low output Z of an emitter follower. Stability can sometimes be a problem with this circuit, however. You can, of course, just add an emitter follower at the output of a source follower. Either of these only takes a couple of extra parts.

Roy Lewallen, W7EL

J M Noeding wrote:
>
> only problem is that FET source followers have very low gain, usually
> -10dB when driving a 50 ohm source
>
> 73
> LA8AK
> --
> remove ,xnd to reply

1369. Re: Mobile Radio Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-15 00:52:17 UTC
From: Sylvan Butler <Znospam+noZs_0202@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrna6omul.b12.Znospam+noZs_0202@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 46311
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equiptment

On Thu, 14 Feb 2002 03:36:04 -0600, Joe Bramblett, KD5NRH <kd5nrh@kd5nrh.net> wrote:
> IMO, what we need to find is a standard that will allow both simple
> connection and disconnection, and easily discerning the source
> capability/draw requirements, while still allowing a high current
> source to power a low current item, but not allow connection of a low
> current source to a high current item.

Overkill.

>
> The only thing I could see working at this point would be to set it up
> with multiple PowerPole units; for example, the regular pair for a
> draw (or source) of 5A or less, for a draw of 5-15A, three shells,
> with only the outer two live, (maybe with a different color for the
> 'dead' shells, to make it more obvious) and for higher draw, four
> shells, again with only the outer two active. Sources would be
> similar; a 5A source bets two shells, a 5-15A source gets three, with
> one ground and two hot, (allowing the 5A load to be connected to it as
> well as the 5-15A) and a >15A source gets four shells, with one ground
> and three hot, so that all of the loads can plug into it.
>
> The above would make it impossible to plug your 12A three-shell mobile
> rig into your 5A, two-shell lighter plug adapter, (well, it would plug
> in, but not complete the circuit) while allowing you to run your 250mA
> two-shell HT off the mobile's four-shell source wiring. That's as
> foolproof as I can think of, though I don't doubt for a second that
> there are plenty of fools just waiting to screw it up.
>
>
> Joe Bramblett, KD5NRH
> kd5nrh@kd5nrh.net
> http://www.kd5nrh.net

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. ##### change ^ to @ ##### |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Fight terrorism, arm the population!

1370. Re: Power Transformer current rating?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-15 01:16:57 UTC
From: Bill & Suzie Whatley <spud286@attbi.com>
Message-ID: <dkZa8.15534$kt5.32447@rwcrnsc52.ops.asp.att.net>
Source record: 46312

The VA rating for the transformer is nominal maximum. What you can get OUT
of the supply will depend on the overall efficiency of the supply you build.

73
WA5VRL
Willis

1371. Command Set Xmitter Cover

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-15 02:07:44 UTC
From: brokebob@aol.com
Message-ID: <20020214210744.16483.00001153@mb-ct.aol.com>
Source record: 46313

I am in need of a cover (entire thing, not just the removable lid) for one of the Command Set Transmitters. Would like to have a black one but aluminum will also work. Got one that you can part with to help me finish my VFO?

brokebob@aol.com (broke=not working, retired=not working, retired=broke)

1372. Heathkit IT-11 and IT-22 Capacitor Testers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-15 02:34:50 UTC
From: "John D. Farr" <jfarr62@comcast.net>
Message-ID: <et_a8.41572$B21.10358527@news1.rdc1.fl.home.com>
Source record: 46314
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.equipment

Greetings, and thanks for reading this. I just acquired a Heathkit IT-11. It won't balance with high capacitor values and the powerfactor control seems to do nothing. I have no schematic for this, but I do have a manual for an IT-22. The controls, measurement ranges, etc. seem to be the same on these two instruments. Can you tell me what the differences are between the two?
Thanks
John D. Farr

1373. Re: Fuse-type light bulb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-15 04:37:51 UTC
From: Marvin Born <mborn@k8xu.com>
Message-ID: <3C6C909F.E3A83F6@k8xu.com>
Source record: 46315

Try MCM Electronics, 1 800 543 4330

Part number 25-090, Fuse Type Lamp 8V 250 ma This is a 3AG size fuse lamp that is 8 volts. It was used in stereo equipment in the 80's There is also a 6 volt version. I know they have the 8 volts lamps in stock as I just bought 10.

Hope this helps.

K8XU

"J. McLaughlin" wrote:

> I have a piece of equipment with bulbs that look like cylindrical fuses.
> They are just under 20 mm long and just under 5 mm in diameter. Both
> ends are marked:
> RR 12V 1W in small block letters.
>
> I have searched the WEB and the usual catalogs with no success. Does
> anyone have a clue as to the proper description or part number?
> Thanks.
>
> Mac N8TT
>
> --
> J. Mc Laughlin - Michigan USA
> Home: JCM@Power-Net.Net
> Office: JCM@McLMcL.Com

1374. Do you have a sick Radio or Amplifier?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-15 05:18:55 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3C6C9A3F.172CDE78@charter.net>
Source record: 46316

Specialize in Older Tube type rigs and Amplifiers of all kinds Tubed,
Transistor, and Ceramic.
http://www.angelfire.com/nb/ni4l/

--

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Click here for more info... <http://www.angelfire.com/nb/ni4l/>

1375. FS: 2 KVA HV Power Transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-15 06:00:41 UTC
From: Bill Abate <wabate@dandy.net>
Message-ID: <9v8p6uc0snp4fj74pi3js6lq7r556dj4ha@4ax.com>
Source record: 46317

For Sale:
2KVA power transformer with 6200 VCT secondary. The primary is tapped at 105, 110, 115 and 125 VAC so this would be ideal for those without 220 in the shack as it can compensate for voltage drop in your wiring. This is an oldie but goodie. I have used it for years without any problems. I'm selling it because I need higher voltage. The only drawback with this transformer is that it is very heavy (the price you pay for CCS duty). I would estimate it at about 80 pounds. I will not ship. If you can get to the western Philadelphia suburbs you can see it in operation and I will help you get it in your car. $75 and a great price for a continuous duty transformer. Should give you about 3000 volts under load.

Email me with questions.

73,

Bill, K3PGB
wabate@dandy.net

1376. KVG filter specs.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-15 10:53:04 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <gapi4a.p92.ln@my.linux.box>
Source record: 46318

Has anybody got any info about the KVG S-69-4A crystal
filter? I have a few of these and also a couple of
Salford Electrical 69-4 A filters, which seem to be
equivalent the the KVG filters. I'm planning to
use one in the receive section of a 6M repeater.

Are there any accepted standards for 6M FM? How
much deviation is normally used on 6M FM? I have
built FM rigs for 2M FM but not for 6M FM.

Many Thanks.

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

1377. Re: Tube type Electronic TR Switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-15 13:22:41 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0202150522.7baced59@posting.google.com>
Source record: 46319

mankind@aol.com (John_in_NJ) wrote in message
news:<919C212B7mankindaolcom@68.39.105.157>...
> Does anyone have the ARRL Hints & Kinks book from 1968 or 1969 ? I need the
> schematic for the electronic T/R switch. I build one back in the 70s and it
> worked great for QSK operation.

Send email to Dean, k5dh@raytheon.com.

He is in the process of building one, I think the same one your are talking about.

Jim
N8EE

1378. Re: KVG filter specs.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-15 15:46:16 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <3C6D2D48.E9DB4DAF@dialpoint.net>
Source record: 46320

Six meter standards are the same as 2 meters. Use 5 khz or slightly
less for the deviation. Many use a subaudio tone as there is lots of
skip on 6 meters. You will have to check the band plan for the
seperation of tx/rx.

E
> Are there any accepted standards for 6M FM? How
> much deviation is normally used on 6M FM? I have
> built FM rigs for 2M FM but not for 6M FM.
>
> Many Thanks.
>
> 73, Ed. EI9GQ.
>
>

1379. Car & Deep Cycle Battery Frequently Asked Questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-15 16:11:38 UTC
From: bjb_darden@yahoo.com
Message-ID: <b3f92570.0202150811.782ea16c@posting.google.com>
Source record: 46321

Latest versions of the Car and Deep Cycle Battery Frequently Asked Questions (FAQ) maybe found at http://www.uuhome.de/william.darden/ Also, you will find a Battery Manufacturers and Brand Names List, Battery References and Information Links and printable version of the above.

If you have any questions or comments, please email me at bjb_darden@yahoo.com

Kindest regards,

BiLL.......

1380. Re: Power Transformer current rating?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-15 19:00:37 UTC
From: k7itm@aol.com
Message-ID: <3200347.0202151100.66884809@posting.google.com>
Source record: 46322

But be careful about that. 15A RMS out of the secondary into, say, a bridge rectifier and a big capacitor will result in somewhat less DC current out. Huh?? Well, the average current magnitude in the secondary must be the same as the DC output, assuming no DC loss path in the supply, but because you draw the current in pulses at the peak of the line voltage, the RMS current is distinctly higher than the average magnitude. A choke input filter can actually provide more output _power_ from a given transformer than a capacitor input filter, even though it's at a lower voltage, because it significantly lowers the RMS current. But chokes are big and heavy and expensive, so people don't use them much. In this case, if you happen to want a "12V" supply, a choke input filter would be quite appropriate, since your 18V secondary into a bridge and capacitor will probably result in 25V out, and a choke input filter would give you more like 15V out. (I happen to have some high-current 5 millihenry chokes that would be great for this...and would probably _give_ you one if you wanted one, if you were near Seattle.)

Hope that's not too much second-guessing of what you really want...and I hope it's useful to you.

Cheers,
Tom

Frank Worm <fworm@norpak.ca> wrote in message news:<3C6BBF9E.1CB002AF@norpak.ca>...
> Thank you for your reply.
> That's what I figured.
> Had to double check the VA thing and it seems I was right
> 270VA divided by 18V
> Thanks a bunch
> Regards
> Frank
>
> W4pqw HS wrote:
>
> > >I have a Hammond class a power transformer.
> > >It's spec's are:
> > >115V AC in
> > >18V AC out
> > >270VA
> > >
> > >How many amps can this xformer provide?
> >
> > Frank you have a 15 amp transformer,would make a nice 13V power supply..270VA
> > divided by 18V = 15A..Good luck Harold W4PQW

1381. Re: Question on News Group protocol

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-15 19:10:24 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0202151110.5212af3f@posting.google.com>
Source record: 46323

If you start at the top of a thread, and read through it in chronological order, you already know what everyone has said. In this case, it makes sense to put a reply at the top, and there is little need to resend all the original text.

If you are replying to a specific comment, then the comment should be snipped out and your answer put just below it.

Dumb question #434779: What percentage of internet traffic is made up of replies to replies to replies... without snipping out all the redundant stuff?

Jim
N8EE

1382. Re: Power Transformer current rating?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-15 19:40:38 UTC
From: Frank <fworm@norpak.ca>
Message-ID: <3C6D8EE9.8060006@norpak.ca>
Source record: 46324

This is interesting. I would like to dig deeper into this.
I'll have to do a little study of what you descibe.
Thanks
Regards
Frank

Tom Bruhns wrote:

> But be careful about that. 15A RMS out of the secondary into, say, a
> bridge rectifier and a big capacitor will result in somewhat less DC
> current out. Huh?? Well, the average current magnitude in the
> secondary must be the same as the DC output, assuming no DC loss path
> in the supply, but because you draw the current in pulses at the peak
> of the line voltage, the RMS current is distinctly higher than the
> average magnitude. A choke input filter can actually provide more
> output _power_ from a given transformer than a capacitor input filter,
> even though it's at a lower voltage, because it significantly lowers
> the RMS current. But chokes are big and heavy and expensive, so
> people don't use them much. In this case, if you happen to want a
> "12V" supply, a choke input filter would be quite appropriate, since
> your 18V secondary into a bridge and capacitor will probably result in
> 25V out, and a choke input filter would give you more like 15V out.
> (I happen to have some high-current 5 millihenry chokes that would be
> great for this...and would probably _give_ you one if you wanted one,
> if you were near Seattle.)
>
> Hope that's not too much second-guessing of what you really want...and
> I hope it's useful to you.
>
> Cheers,
> Tom
>
> Frank Worm <fworm@norpak.ca> wrote in message news:<3C6BBF9E.1CB002AF@norpak.ca>...
>
>>Thank you for your reply.
>>That's what I figured.
>>Had to double check the VA thing and it seems I was right
>>270VA divided by 18V
>>Thanks a bunch
>>Regards
>>Frank
>>
>>W4pqw HS wrote:
>>
>>

>>>>I have a Hammond class a power transformer.
>>>>It's spec's are:
>>>>115V AC in
>>>>18V AC out
>>>>270VA
>>>>
>>>>How many amps can this xformer provide?
>>>>
>>>Frank you have a 15 amp transformer,would make a nice 13V power supply..270VA
>>>divided by 18V = 15A..Good luck Harold W4PQW
>>>

1383. Re: Tube type Electronic TR Switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-15 20:10:12 UTC
From: la8ak.xnd@online.no
Message-ID: <3c6d6874.326084291@news.online.no>
Source record: 46325

On Thu, 14 Feb 2002 15:52:17 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>The reason for the low gain is the relatively high output impedance (=
>1/gm) of a source follower. An N-channel FET and PNP transistor can be
>connected together in what's sometimes called a "bootstrap" follower to
>give you the high input Z of a source follower and the low output Z of
>an emitter follower. Stability can sometimes be a problem with this
>circuit, however. You can, of course, just add an emitter follower at
>the output of a source follower. Either of these only takes a couple of
>extra parts.
>
>Roy Lewallen, W7EL
>
Yes, I used it for an active antenna for LW to 80m 30 years ago, used
MPF102 with 3mA current and a PNP device with 20mA (2N4036?), worked
fine, but it seems too complicated for many, hi. Only problem was
intermodulation with strong local mW-bc station

Another problem with such circuit is that it is difficult to avoid 3dB
reduction in gain from 10 to 30MHz.
It was another solution recently shown in Radcom for 136kHz receiver
with P8002 or CP643 with drain and source connected to a transformer
through separate links, but I am not certain how good it is for HF.
Just waiting for the circuit diagram from LA7MI who made an active
antennna with good properties....(he had to cure some problems with
local VHF FM transmitter using an LPF)

73
LA8AK

www.nrhf.no

--
remove ,xnd to reply

1384. ICOM CI-IV description needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-15 21:19:08 UTC
From: CA <sm6pxj@hotmail.com>
Message-ID: <xWeb8.10167$O5.23217@nntpserver.swip.net>
Source record: 46326

Looking for a description of the CI-IV standard by Icom.
It is used in the IC-751A and some other Icom rigs.
Guess it should be possible to have a small PIC uController to
make a parallell/serial converter, similar to the Icom UX14 option
which is no longer available.
/sm6pxj

1385. Re: ICOM CI-IV description needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-15 22:02:00 UTC
From: SideBand <abNO8SPAMlr@csotbs.org>
Message-ID: <3C6D8558.6080805@csotbs.org>
Source record: 46327

I've built a combination CI-V & Sound card interface (for SSTV, PSK, etc)
that works quite nicely without any IC's at all. I've been thinking about
selling them, but I'm not done testing it.

CA wrote:

> Looking for a description of the CI-IV standard by Icom.
> It is used in the IC-751A and some other Icom rigs.
> Guess it should be possible to have a small PIC uController to
> make a parallell/serial converter, similar to the Icom UX14 option
> which is no longer available.
> /sm6pxj

--
73 de AB8LR, Chris

http://csotbs.shopiwon.com/ for great deals on computer products.

1386. Re: ICOM CI-IV description needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-15 22:38:25 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u6r3fjc8bugm72@corp.supernews.com>
Source record: 46328

You want to go from a parallel port to CI-V? Seems like an odd thing to do.
Most of the software out there expects the radio on a serial port.

The CI-V interface is normal serial except that the levels are open
collector instead of RS-232, so there isn't a lot about the protocol you
need to know. And the protocol itself is pretty well documented. In fact,
just last week I got CI-V output working from a digital dial for a radio I
am building, so that I can use my logger without manually entering the
frequency. Pretty straightforward, actually.

..

"CA" <sm6pxj@hotmail.com> wrote in message
news:xWeb8.10167$O5.23217@nntpserver.swip.net...
> Looking for a description of the CI-IV standard by Icom.
> It is used in the IC-751A and some other Icom rigs.
> Guess it should be possible to have a small PIC uController to
> make a parallell/serial converter, similar to the Icom UX14 option
> which is no longer available.
> /sm6pxj
>
>
>

1387. Re: ICOM CI-IV description needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-15 22:42:31 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <u6r3n0jv9v0pbd@corp.supernews.com>
Source record: 46329

Give this link a try: http://www.plicht.de/ekki/civ/

The CI-V is serial data. All you need is a level converter in order to interface it to RS-232. There are a number of circuits available on the Internet.

1388. Re: Power Transformer current rating?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 01:00:22 UTC
From: k7itm@aol.com
Message-ID: <3200347.0202151700.6780ef5e@posting.google.com>
Source record: 46330

Frank <fworm@norpak.ca> wrote in message news:<3C6D8EE9.8060006@norpak.ca>...
> This is interesting. I would like to dig deeper into this.
> I'll have to do a little study of what you descibe.
> Thanks
> Regards
> Frank
>
> Tom Bruhns wrote:
>
> > But be careful about that. 15A RMS out of the secondary into, say, a
> > bridge rectifier and a big capacitor will result in somewhat less DC
> > current out. Huh??
...etc

I'm not sure where you might find a good discussion of this effect.
The following is a very concise explanation...I hope it's not too
concise to be understandable.

The rating of a transformer, ultimately, is based on how hot it gets.
The insulation is destroyed if it gets too hot. Much of the heating
is caused by I^2*R resistive heating in the windings, and of course,
the power dissipated depends then on the RMS current value. In fact,
if you hooked the secondary to a good (AC-rated) capacitor, you could
get as much transformer heating as if you were driving a resistive
load, even though the capacitor dissipates practically nothing
compared with the resistive load. So then, consider the RMS current
versus average current...if you have 1A continuous, unvarying, then
that's 1A RMS also. If you have a sinewave of current with 1.41 amps
peak, then the RMS value is 1.00 amps, but the average magnitude is
only 0.90 amps (for the mathematically inclined,
sqrt(2)*integral(sin(theta))d(theta)[from 0 to pi] / pi =
2*sqrt(2)/pi). But if you draw a square pulse of current that's 3.16
amps for 1/10 of a cycle and zero the rest of the time, that's still
1.00 amps RMS (3.16^2 * 1/10), but the average current is only 0.316
amp (3.16 * 1/10).

So with a choke-input filter, if the choke's big enough, the current
is fairly close to constant, and the RMS current is only a little more
than the average (DC) current. But with a capacitor input filter, if
the capacitor is large enough that it doesn't discharge much bewteen
charging pulses, the pulses are relatively narrow, and the RMS current
is rather higher than the average current. (A half-wave rectifier +
capacitor is a really bad load for a transformer because the pulses
are narrower than for the full wave case AND the rectifier puts a DC
current through the transformer winding, which tends to cause core

saturation.)

For a graphic demonstration of this, connect up a capacitive input filter with a large cap. Let's say it's something like 15V output. Put a 1-ohm half-watt resistor in series from the capacitor to a 22-ohm 20 watt load resistor, so the net load current is 15V/23 ohms = 0.65A. Then the half-watt resistor will dissipate about .42 watts. Note how hot it gets. Now move the 1-ohm resistor over between the rectifier and the capacitor, and connect the 22-ohm load directly across the cap. Observe the half-watt resistor. It will get considerably hotter than it did before...perhaps to the point of destroying itself, since it will almost certainly be dissipating more than half a watt. But the load current in the 22-ohm resistor will actually be a bit less in the second case than it was in the first case. -- If you were to do the same thing with a good choke-input filter, you'd find the 1-ohm resistor dissipating only very slightly more in the second case.

Cheers,
Tom

1389. Re: Power Transformer current rating?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 02:51:26 UTC
From: Sparks W4EAS <sparksw4eas@mindspring.com>
Message-ID: <3C6DC92E.23B8@mindspring.com>
Source record: 46331

:-) Well Done! Sparks W4EAS

1390. Re: MRF138 - What are They Worth?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 03:23:23 UTC
From: melissa@NOoSPAMdimensional.com
Message-ID: <3c6dd0ab$1_2@omega.dimensional.com>
Source record: 46332
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.misc,sci.electronics.design

cydw@optsource.com (Cyd Weeks) bestowed such eternal wisdom upon us by
saying from <7bf84faa.0202111313.5d9210bd@posting.google.com>:

>melissaNo0oOSPAM@dimensional.com (Melissa Liberty - Colorado) wrote in
>message news:<3c642caf_2@omega.dimensional.com>...
>> cydw@optsource.com (Cyd Weeks) bestowed such eternal wisdom upon us by
>> saying from <7bf84faa.0202080915.7edb7300@posting.google.com>:
>>
>> >melissaNo0oOSPAM@dimensional.com (Melissa Liberty - Colorado) wrote in
>> >message news:<3c635618_2@omega.dimensional.com>...
>> >> BTW, I did find my old Motorola data book with the sheets in it for
>> >> this.
>> >>
>> >> I thought I also had some typical circuits for it somewhere but
>> >> haven't found those yet. Seems pretty simple for a RF designer/ham
>> >> though.
>> >>
>> >>
>> >Just so you know... I was just quoted $125.00 each for 18 pcs.
>> >You have an expensive little part on your hands. :o)
>>
>> Whoa! From who?
>
>From a company in the UK that deals in the parts. I am also sure,
>that if you call RF, you will get quoted in at least the $70.00
>something range. A smart ham may be able to avoid paying those
>prices, and you may be willing to share them with someone, which is a
>beautiful thing, but, if you are interested in keeping a couple and
>marketing the others, call a couple of places (those rip off ones,
>lol) and see if they will take them for a nice price. There happen to
>be oems out there that aren't interested in "figuring out a different
>cheaper way"...they just want a part that is already approved that
>will do the job.

Ok, well I decided to try one on Ebay and see:
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1333352146

--
- Melissa
Somewhere in Colorado

1391. Re: Fuse-type light bulb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 04:35:34 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <l7or6u859qht1i9pratgptmooat413sva8@4ax.com>
Source record: 46333

-Your Friend Bill- <none@coqui.net> wrote:

>That simply seems to be the name they go by since they resemble a fuse
>and the term lamp seems to be more common than bulb these days for
>smaller type things that light up. Hence the name fuse lamp.
>You triggered my memory that I needed some and I ordered them today.
>8/$10 for a Sansui stereo receiver. I got mine from
>http://www.vintage-electronics.net/

I checked them out and they seem to carry the same "fuse lamps" that
everyone else carries. The bulbs I've been looking for resemble these
except that they have pointed ends, rather than flat. I believe the
correct name for this bulb is "festoon." These festoon lamps were used
in Fisher and Dynaco sets from the 60s.

Does anyone know if this older style are still available anywhere?

-

Jim Adney jadney@vwtype3.org
Madison,Wisconsin USA

1392. Re: MRF138

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 07:23:00 UTC
From: -Your Friend Bill- <none@coqui.net>
Message-ID: <3C6E08D4.6C00F6AF@coqui.net>
Source record: 46334
Cross-posted to: sci.electronics.components,sci.electronics.misc,sci.electronics.design,rec.radio.amateur.homebrew

Melissa - Colorado wrote:
>
> For those involved in the discussion last week, I decided to try selling one
> of the 14 I have, on Ebay:
> http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1333352146

For bux, probably your best move yet...
-WX4A
>
> --

1393. Re: Fuse-type light bulb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 07:28:01 UTC
From: -Your Friend Bill- <none@coqui.net>
Message-ID: <3C6E0A01.EFF9C976@coqui.net>
Source record: 46335

Jim Adney wrote:
>
> -Your Friend Bill- <none@coqui.net> wrote:
>
> >That simply seems to be the name they go by since they resemble a fuse
> >and the term lamp seems to be more common than bulb these days for
> >smaller type things that light up. Hence the name fuse lamp.
> >You triggered my memory that I needed some and I ordered them today.
> >8/$10 for a Sansui stereo receiver. I got mine from
> >http://www.vintage-electronics.net/
>
> I checked them out and they seem to carry the same "fuse lamps" that
> everyone else carries. The bulbs I've been looking for resemble these
> except that they have pointed ends, rather than flat. I believe the
> correct name for this bulb is "festoon." These festoon lamps were used
> in Fisher and Dynaco sets from the 60s.
>
> Does anyone know if this older style are still available anywhere?

Sorry if I gave you a bad lead. Those lamps are common as dirt and I
hope one of the other posters will give you a better lead. Sounds like
the dome lamps in my 86 Isuzu Trooper. :-)

-ex

1394. QRP kits/homebrews

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 08:01:14 UTC
From: Checkered Demon <oh_beer_thirty@hotmail.com>
Message-ID: <elob8.307$mG7.170685731@newssvr21.news.prodigy.com>
Source record: 46339

I am planning on passing my General test in a couple of weeks. Started dreaming of QRP transceivers for trips to the mountains. I have lots of questions. The size of the rig is not important. It should be on the higher end in the power department. i.e.. 5W is better than 350 mW . Battery life is not that important either.

1) What band or bands are best for DXing with a QRP rig?
2) What type of antenna? Long wire di-pole is OK.
3) Most of the kits I have seen are of "older" design. Are these still ok or are there newer designs that I have not seen yet? Are there good designs in the books and magazines that are not yet kits ? Where should I look?
4) Of the kits that are out there, is one better than the other?
5) Is there a QRP rig that is good enough to double in the home shack?
6) Is there a QRP newsgroup?

Thanks in advance for any help that you may give.

Pete
KG6GRZ

1395. Re: Power Transformer current rating?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 08:52:32 UTC
From: mjsilva697@earthlink.net
Message-ID: <27085883.0202160052.5f1f2448@posting.google.com>
Source record: 46336

Take a look at

http://www.hammondmfg.com/pdf/5c007.pdf

for a good summary of DC vs. AC ratings in power transformers.

73,
Mike, KK6GM

Frank <fworm@norpak.ca> wrote in message news:<3C6D8EE9.8060006@norpak.ca>...
> This is interesting. I would like to dig deeper into this.
> I'll have to do a little study of what you descibe.
> Thanks
> Regards
> Frank
>
> Tom Bruhns wrote:
>
> > But be careful about that. 15A RMS out of the secondary into, say, a
> > bridge rectifier and a big capacitor will result in somewhat less DC
> > current out. Huh?? Well, the average current magnitude in the
> > secondary must be the same as the DC output, assuming no DC loss path
> > in the supply, but because you draw the current in pulses at the peak
> > of the line voltage, the RMS current is distinctly higher than the
> > average magnitude. A choke input filter can actually provide more
> > output _power_ from a given transformer than a capacitor input filter,
> > even though it's at a lower voltage, because it significantly lowers
> > the RMS current. But chokes are big and heavy and expensive, so
> > people don't use them much. In this case, if you happen to want a
> > "12V" supply, a choke input filter would be quite appropriate, since
> > your 18V secondary into a bridge and capacitor will probably result in
> > 25V out, and a choke input filter would give you more like 15V out.
> > (I happen to have some high-current 5 millihenry chokes that would be
> > great for this...and would probably _give_ you one if you wanted one,
> > if you were near Seattle.)
> >
> > Hope that's not too much second-guessing of what you really want...and
> > I hope it's useful to you.
> >
> > Cheers,
> > Tom
> >
> > Frank Worm <fworm@norpak.ca> wrote in message news:<3C6BBF9E.1CB002AF@norpak.ca>...
> >
> >>Thank you for your reply.

> >>That's what I figured.
> >>Had to double check the VA thing and it seems I was right
> >>270VA divided by 18V
> >>Thanks a bunch
> >>Regards
> >>Frank
> >>
> >>W4pqw HS wrote:
> >>
> >>
> >>>>I have a Hammond class a power transformer.
> >>>>It's spec's are:
> >>>>115V AC in
> >>>>18V AC out
> >>>>270VA
> >>>>
> >>>>How many amps can this xformer provide?
> >>>>
> >>>Frank you have a 15 amp transformer,would make a nice 13V power supply..270VA
> >>>divided by 18V = 15A..Good luck Harold W4PQW
> >>>

1396. Re: ICOM CI-IV description needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 09:50:17 UTC
From: CA <sm6pxj@hotmail.com>
Message-ID: <OWpb8.10321$O5.23235@nntpserver.swip.net>
Source record: 46337

OK. Some basic information seems appropriate here:

CI-IV is a parallel I/O port.
CI-V is a serial I/O port.

Some older Icom radios use the CI-IV interface.
/sm6pxj Christer

xpyttl skrev i meddelandet ...
>You want to go from a parallel port to CI-V? Seems like an odd thing to
do.
>Most of the software out there expects the radio on a serial port.
>
>The CI-V interface is normal serial except that the levels are open
>collector instead of RS-232, so there isn't a lot about the protocol you
>need to know. And the protocol itself is pretty well documented. In fact,
>just last week I got CI-V output working from a digital dial for a radio I
>am building, so that I can use my logger without manually entering the
>frequency. Pretty straightforward, actually.
>
>..
>
>"CA" <sm6pxj@hotmail.com> wrote in message
>news:xWeb8.10167$O5.23217@nntpserver.swip.net...
>> Looking for a description of the CI-IV standard by Icom.
>> It is used in the IC-751A and some other Icom rigs.
>> Guess it should be possible to have a small PIC uController to
>> make a parallell/serial converter, similar to the Icom UX14 option
>> which is no longer available.
>> /sm6pxj
>>
>>
>>
>
>

1397. Re: KVG filter specs.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 11:00:58 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <a5el4a.ra3.ln@my.linux.box>
Source record: 46338

In article <3C6D2D48.E9DB4DAF@dialpoint.net>, Ralph Mowery wrote:
> Six meter standards are the same as 2 meters. Use 5 khz or slightly
> less for the deviation. Many use a subaudio tone as there is lots of
> skip on 6 meters. You will have to check the band plan for the
> seperation of tx/rx.

Thanks Ralph,

I'll start with +/- 4KHz deviation on the TX and 15KHz
IF bandwidth in the RX.

We don't get to pick and choose the frequencies. They are
assigned in the licence. We will be using 600KHz separation.

I still haven't managed to dig up any information about
the KVG S-69-4A filters. I suppose I'll have to measure
the bandwidth with a signal generator/ oscilloscope.

Thanks again.

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

1398. Re: QRP kits/homebrews

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 13:21:08 UTC
From: Henry Gernhardt/Andrea Winship <hcg_NOSPAM_alw@earthlink.net>
Message-ID: <3C6E5C90.67597F81@earthlink.net>
Source record: 46340

Pete---

> Started dreaming of QRP transceivers for trips to the mountains.

I've heard wonderful things about Elecraft:

http://www.elecraft.com

The K1 is their QRP CW only offering, capable of two bands stock, or you can order a four-band kit (you specify which bands in the two-band stock module). The K-2 is for more advanced kitbuilders, and offers (I believe) all-band SSB operation.

As for the antenna: as far as portability and effectiveness, the best bet is a full-length half-wave dipole up as high as you can get it. If you can put it up half a wavelength, you can feed it with a half wavelength of twinlead without having to build a 4:1 or 9:1 balun. To extend the length of the feedline, simply attach a coax pigtail. The nice thing about using twinlead is that it tends to be lower loss _AND_ more compact than coaxial cable. Check out the article on the portable 20m dipole in the Feb '02 QST.

Good luck,

Henry C. Gernhardt, III
KE4PIB

remove _NOSPAM to reply direct

1399. Bulova D10104 Freq Std ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 15:30:20 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <u6suoo2c7nbj32@corp.supernews.com>
Source record: 46341

I'm looking for information on this unit made by American Time Products, Bulova Watch Co. Inc. Using a 1.915.2MHz crystal it ouputs frequencies of 10, 20 40, 60, 80 100, 120, 140, 160, 180, and 190 Hz . It also has the following stamped on it 6625-00-649-4279 Calibrator, P/N TS65CFMQ1-D10104, DAAB07-80-C-1448, It's in an 6x8x5 inch box., made in the early 1980s. I guess it was used as a frequency standard to calibrate some kind of time piece or other device. Can anyone share any info?
tnx
hank wd5jfr

1400. Lithium Ion Battery charging circuit design?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 16:00:36 UTC
From: owner@pa-sitrep.com
Message-ID: <3c6e817c.171120976@news.city-net.com>
Source record: 46342

Hello all,

I have access to some used lithium ion batteries but have no way to charge them. I know that you can't use a regular charger because the batteries can explode.

Does anyone know where I can find a schematic to build an ic controlled charging circuit for lithium ion batteries? I've tooled around on the internet looking for some plans but so far I haven't had any luck.

THanks.

73

David Kleber, KB3FXI
www.PA-SitRep.com

1401. Re: KVG filter specs.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 17:16:28 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0202160916.c179d1@posting.google.com>
Source record: 46343

Eamon Skelton <Xnospam@oceanfree.net> wrote in message
news:<a5el4a.ra3.ln@my.linux.box>...
> In article <3C6D2D48.E9DB4DAF@dialpoint.net>, Ralph Mowery wrote:
> > Six meter standards are the same as 2 meters. Use 5 khz or slightly
> > less for the deviation. Many use a subaudio tone as there is lots of
> > skip on 6 meters. You will have to check the band plan for the
> > seperation of tx/rx.
>
> Thanks Ralph,
>
> I'll start with +/- 4KHz deviation on the TX and 15KHz
> IF bandwidth in the RX.
>
> We don't get to pick and choose the frequencies. They are
> assigned in the licence. We will be using 600KHz separation.
>
> I still haven't managed to dig up any information about
> the KVG S-69-4A filters. I suppose I'll have to measure
> the bandwidth with a signal generator/ oscilloscope.
>
> Thanks again.
>
> 73, Ed. EI9GQ.

Has KVG changed their numbering system in recent years? Because
that number doesn't look like anything I recognize. I just remembered
that there is a list of KVG filters in the ARRL Electronics Data Book
(admittedly, a quarter century old), and all the filters listed
start with XF. The number that follows is the IF frequency, and
then there's one or two letters that denote bandwidth (and there
seems no patter).

So XF-9D is a 9MHz filter with a 5KHz passband, and a XF-107B is
a 10.7MHz filter with a 15KHz passband.

I haven't seen a list of KVG filters in recent years, so maybe I've
missed a changeover to a new numbering system. But perhaps you haven't
found data on this filter because it's a non-standard type? Maybe
it's a house number, and the filter came out of, or at least was
intended for, a specific piece of commercial equipment?

There's nothing like finding unindentifiable crystal filters.
I picked up some sort of commercial board some years back, and
the crystal filter looks like it might be a good one, but there's
not even any markings on it.

Michael VE2BVW

1402. Re: ICOM CI-IV description needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 17:33:50 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u6t659juiqu254@corp.supernews.com>
Source record: 46344

"CA" <sm6pxj@hotmail.com> wrote in message
news:OWpb8.10321$O5.23235@nntpserver.swip.net...
> OK. Some basic information seems appropriate here:
>
> CI-IV is a parallel I/O port.
> CI-V is a serial I/O port.

Good night my little Rosanne Rosanadana

1403. Re: QRP kits/homebrews

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 17:50:42 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u6t71gpfi4a2ba@corp.supernews.com>
Source record: 46346

Henry was right about the Elecraft stuff - actually, tho, the K1 is available in 2 and 4 band flavors out of the box and can be upgraded from 2 to 4 bands if you already have the 2 band version. On the 4 band unit, you specify which 4 bands when you build it, on the 2 band unit, you specify the 2 bands when you buy it. On the 4 bander, there are some limitations on combinations of bands.

The Elecraft rigs are pretty much high end rigs ... the 2 band K1 is almost $300 stripped, over $400 reasonably equipped. The K2 is even fancier, and the SSB is actually an option.

The K1 does have an internal battery option which is pretty nice for backpacking.

A lower priced option is the Small Wonder Labs SW-xx+ rigs. These are single banders in the $100 neighborhood. If I recall, these are in the 3 watt neighborhood. I can tell you from practical experience that there really isn't much difference between 5 watts and 3 watts. On some rigs, tho, particularly the K1, 3 watts can be a lot more battery-friendly than 5. I can operate my K1 all weekend on a set of AA nicads at 3 watts. But at 5 I need to drag along a gel-cell. However, with the big ol' gel-cell, I can go a week if I'm not transmitting a lot.

I would encourage you to graze the archives of the QRP-L reflector at http://qrp.lehigh.edu/lists/qrp-l/. The choice of bands, antennas, etc is very much dependent on exactly what you do and what you like. Personally, I like 20 because you can easily throw a dipole up in a tree, and it's a very QRP friendly band. However, if you hike during the day, and do your operating late at night in the winter, 20 might not be so much fun! Some people really like 30 because of no contests. Others like 15 or 10 because the DX is better, but it's open less of the time. There is a TON of information in the QRP-L archives about all this stuff ... unfortunately, there's a lot of stuff to cover and for any one topic it's not very dense. It's much easier to find stuff on the QRP-L CD, but that's hard to get these days.

Another great place for input on portable equipment and backpacking is the Adventure Radio Society, http://www.natworld.com/ars/. This is a group dedicated to your topic. They have pretty extensive tests of all the popular QRP rigs. Keep in mind, tho, that many of the better rigs (the Red Hot 20, or the DSW-20 for example) are hard to get, and you may need to try to find one used (QRP-L is a good source for that if you are quick!)

Hope this helps

..

"Checkered Demon" <oh_beer_thirty@hotmail.com> wrote in message
news:elob8.307$mG7.170685731@newssvr21.news.prodigy.com...
> I am planning on passing my General test in a couple of weeks. Started
> dreaming of QRP transceivers for trips to the mountains. I have lots of
> questions. The size of the rig is not important. It should be on the
higher
> end in the power department. i.e.. 5W is better than 350 mW . Battery
life
> is not that important either.
>
> 1) What band or bands are best for DXing with a QRP rig?
> 2) What type of antenna? Long wire di-pole is OK.
> 3) Most of the kits I have seen are of "older" design. Are these still ok
> or are there newer designs that I have not seen yet? Are there good
designs
> in the books and magazines that are not yet kits ? Where should I look?
> 4) Of the kits that are out there, is one better than the other?
> 5) Is there a QRP rig that is good enough to double in the home shack?
> 6) Is there a QRP newsgroup?
>
> Thanks in advance for any help that you may give.
>
>
> Pete
> KG6GRZ
>
>
>

1404. Re: MRF138 - What are They Worth?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 17:51:04 UTC
From: legg@magma.ca
Message-ID: <e715b5cc.0202160951.29f42468@posting.google.com>
Source record: 46345
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.misc,sci.electronics.design

Melissa,

In all fairness, you might find that more people are willing to pay
more money, if the quantity offered is two or more.

Check your app notes to see how many designs are push-pull.

Then consider the problem of maintenance spares when considering the
employment of old products.

I think you could add info to your ad, indicating that more parts are
available to the winning bidder only, by pre-arrangement, or something
like that.

RL

>
> Ok, well I decided to try one on Ebay and see:
> http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1333352146

1405. Re: Lithium Ion Battery charging circuit design?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 18:06:57 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <pzzb8.86583$H37.11484656@news2-win.server.ntlworld.com>
Source record: 46251

> Does anyone know where I can find a schematic to build an ic
> controlled charging circuit for lithium ion batteries? I've tooled
> around on the internet looking for some plans but so far I haven't had
> any luck.
==========
Sorry ,no schematic ,just info that the Maha Energy Inc charger MH-C777Plus
charges NiCad-NimH and Li Ion batteries ,the latter type with a max current
of 400 mA
www.mahenergy.com and adverts in QST.

Frank gm0csz.kn6wh@ntlworld.com

1406. 1975 ARRL MANUAL

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 18:07:50 UTC
From: DCLIFF@webtv.net
Message-ID: <6863-3C6E9FF6-33@storefull-2173.public.lawson.webtv.net>
Source record: 46247

I need the above book in order to look up my old call letters. I had a novice lic. that I got in 1974 and have lost the licence and forgot the call letters.
If you have one and do not want to sell it would you be so kind as to look this info. up in the book for me? It would be with my name and town name. Thanks for any help, I need his info real bad.
Dennis Lassetter
Newnan, Ga.
Please send any info via e mail to:
dcliff@webtv.net

Dennis in Ga.

1407. Ham radio parody of another Britney Spears song

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 18:44:10 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0202161044.662bde0e@posting.google.com>
Source record: 46248
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.dx

http://www.jasonhsu.com/humor.html

Check out my ham parody of the latest hit song by Britney Spears. The original is "I'm Not A Girl, Not Yet A Woman". My parody is "I Am A Ham, Not Yet An Old Hand".

Jason Hsu, AG4DG
jason_hsu_802701@@@@@yahoo.com
http://www.jasonhsu.com/ham_radio-technical.html

1408. Replacement Part

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 19:51:56 UTC
From: rob34 <rob34@infinet.com>
Message-ID: <3c6eb865$0$1603$4c5ecdc7@news.erinet.com>
Source record: 46249

I am hoping someone can lead me to a site or a source where I can get a replacement for a "mesfet" with the number of 3SK166.Sony no longer makes it,but it is used in a Icom vhf-uhf transceiver.Icom makes their new units with this same component.I can get it from them,but was hoping to find another source.Thank`s for any info. Rob

1409. GENERAL ELECTRIC Power Transformer for 200-300 Watt Solid State Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 20:34:37 UTC
From: mnowlen@yahoo.com
Message-ID: <3c6ec2d4.1074965@news.reston1.va.home.com>
Source record: 46250
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.components

GENERAL ELECTRIC TF4RX02NA Power Transformer

Has four seperate 32 volt @ 4 Amp windings. Connect in series for 128
Volts or +/- 64 Volts Center Tapped. Primary tapped for 109,
115,120,126, and 132 Volts. Potted in military style case with
terminals. Weight: 20 Lbs. Great for 200-300 Watt Solid State Amp.

see picture:
http://members.home.net/mnowlen1/equipment/ge-power-trans.jpg

Very Good Condition, Tested and working.
Two available.
$50 each + Shipping
Send zip code for estimate

Please reply via e-mail or telephone

Thanks for reading.

Mike Nowlen
mnowlen@yahoo.com
(703) 716-1363

1410. CCA Low Power AM Night Feb 20th

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 21:15:56 UTC
From: Larry Saletzki <wa9vrh@ocslink.com>
Message-ID: <3c6ec8a3_1@corp.newsgroups.com>
Source record: 46252
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.shortwave

Back by popular demand! This Wednesday February 20th the CCA will be sponsoring a low power AM night on 3880kcs.

We will be looking for 100 watts or less. Things like DX-60's, Knight T60's, Gonset G77, Harvey Wells T-50s' Multi-Elmac's etc.

REMEMBER you DO NOT have to be running Collins gear to check in. Everything is welcome!

Each ncs will start at 08:00pm in their time zone.

We will have 4 main ncs. One on the East coast, Midwest, Mountain area, and West coast. The main ncs will have others in their area helping with their hour. (Please note ONE HOUR). At the end of their hour the main ncs for that region will contact the next regions ncs and turn ncs over to them etc.
etc. etc.

Starting at 8:00pm EST (01:00 UTC) Bill K2LNU ncs will start the net
At 02:00 UTC East coast ncs will turn ncs to Midwest ncs
At 03:00 UTC Midwest ncs will turn ncs to Mountain ncs
At 04:00 UTC Mountain ncs will turn ncs to West coast ncs

comments please to wa9vrh@ocslink.com

Visit our website at www.collinsradio.org for more information on AM activities.

Have fun and enjoy the great sounding AM signals. 73's Larry WA9VRH

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1411. Re: MRF138 - What are They Worth?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-16 23:10:04 UTC
From: melissa@NOSPAMdimensional.com
Message-ID: <3c6ee6cc$1_2@omega.dimensional.com>
Source record: 46264
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.misc,sci.electronics.design

legg@magma.ca (R.Legg) bestowed such eternal wisdom upon us by saying from <e715b5cc.0202160951.29f42468@posting.google.com>:

>Melissa,
>
>In all fairness, you might find that more people are willing to pay
>more money, if the quantity offered is two or more.
>
>Check your app notes to see how many designs are push-pull.
>
>Then consider the problem of maintenance spares when considering the
>employment of old products.
>
>I think you could add info to your ad, indicating that more parts are
>available to the winning bidder only, by pre-arrangement, or something
>like that.

Sounds like a good idea but I already have a bid on that auction and can't change it now.

I was also trying to sell my CD of Microsoft Office 97 Pro on Ebay but they went and canceled my auction today, I'm not sure why yet, and it sounds like Microsoft is pulling the strings. The thing is, it was a legal copy (not pirated) that I bought on Ebay originally, used for a few years, then just deleted from my hard drive and wanted to sell. Doesn't Microsoft allow ownership of their software, or allow me to sell something I legally own? This stinks big time.

--
- Melissa
Somewhere in Colorado

1412. WANTED: how to make a wire flexible yet able to retain its shape

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 00:56:26 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0202161656.d803e97@posting.google.com>
Source record: 46253
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

As I mentioned before, I'm working on a better handheld antenna for better performance than my trusty 2m/70cm RD-98 antenna, yet retains much of its convenience. This antenna would have an SMA connector and radials.

The RD-98 antenna is VERY flexible but manages to retain its shape. If you apply pressure to the antenna, you can bend it into a curve. You don't have to worry about breaking it. Although the antenna is 17 inches long, I can compress it substantially. But in spite of the flexibility, the antenna retains its shape. If you let go of the antenna after bending it, it bounces back to its normal vertical shape.

How can I get a piece of wire to exhibit the same characteristics as my RD-98 antenna? The antenna is wrapped in a black plastic/rubber material. I would like the vertical element and radials to have the flexible-yet-shape-retaining shape. Does anyone know what material would give a thin wire (#18/20 solid copper) such properties?

Jason Hsu, AG4DG
jason_hsu_802701@@@@yahoo.com
http://www.jasonhsu.com/ham_radio-technical.html

1413. Re: Ham radio parody of another Britney Spears song

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 01:31:56 UTC
From: Unclaimed Mysteries <k4doh@mindspring.com>
Message-ID: <a4n14k$a5a$1@slb0.atl.mindspring.net>
Source record: 46254
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.dx

"Jason Hsu" <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0202161044.662bde0e@posting.google.com...
> http://www.jasonhsu.com/humor.html
>
> Check out my ham parody of the latest hit song by Britney Spears. The
> original is "I'm Not A Girl, Not Yet A Woman". My parody is "I Am A
> Ham, Not Yet An Old Hand".

Considering the demographics and sensibilities of the majority of USA hams, you'd be better off making parodies about the likes of Phyllis Diller and George Gobel*. Mix in a few jew jokes and you'll have the Liberty Net crowd rolling in the aisles.

73 Corry K4DOH
--

It Came From C. L. Smith's Unclaimed Mysteries.
http://www.unclaimedmysteries.net

*Not to be confused with George Goble, America's Most Dangerous Barbecue Chef:
http://ghg.ecn.purdue.edu/~ghg/

1414. Re: QRP kits/homebrews

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 01:48:26 UTC
From: lagagnon@fakesprint.ca
Message-ID: <3c6f0b4f.631910@news.sprint.ca>
Source record: 46255

On Sat, 16 Feb 2002 08:01:14 GMT, "Checkered Demon"
<oh_beer_thirty@hotmail.com> wrote:

>I am planning on passing my General test in a couple of weeks. Started
>dreaming of QRP transceivers for trips to the mountains. I have lots of
>questions. The size of the rig is not important. It should be on the higher
>end in the power department. i.e.. 5W is better than 350 mW . Battery life
>is not that important either.
>
>1) What band or bands are best for DXing with a QRP rig?
the higher the band the more efficient you will find a QRP rig and
antenna in general...
>2) What type of antenna? Long wire di-pole is OK.
I always use a multiband lightweight dipole with alligator clips to
select the band
>3) Most of the kits I have seen are of "older" design. Are these still ok
>or are there newer designs that I have not seen yet? Are there good designs
>in the books and magazines that are not yet kits ? Where should I look?
how long is a piece of string? But my recommendation is the Wilderness
Sierra or the Elecraft K1 or K2....
>4) Of the kits that are out there, is one better than the other?
see above...
>5) Is there a QRP rig that is good enough to double in the home shack?
any of the above
>6) Is there a QRP newsgroup?
QRP-L
>
>Thanks in advance for any help that you may give.
>
>
>Pete
>KG6GRZ
>
ok....Larry VE6MK
>

****
to send direct email remove "fake" from address

1415. Re: Lithium Ion Battery charging circuit design?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 03:58:43 UTC
From: owner@pa-sitrep.com
Message-ID: <3c6f2a2f.214314232@news.city-net.com>
Source record: 46256

Okay, Frank. I'll check them out. I was hoping to find something I
could build myself... I'd like to make a whole bunch of them.

-Dave, KB3FXI
www.PA-SitRep.com

On Sat, 16 Feb 2002 18:06:57 -0000, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>
>> Does anyone know where I can find a schematic to build an ic
>> controlled charging circuit for lithium ion batteries? I've tooled
>> around on the internet looking for some plans but so far I haven't had
>> any luck.
>================================
>Sorry ,no schematic ,just info that the Maha Energy Inc charger MH-C777Plus
>charges NiCad-NimH and Li Ion batteries ,the latter type with a max current
>of 400 mA
>www.mahenergy.com and adverts in QST.
>
>Frank gm0csz.kn6wh@ntlworld.com
>
>
>

1416. Tektronix selling price surveys updated on my website

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 04:40:40 UTC
From: "Phil T." <phil@vaxxine.com>
Message-ID: <3C6F3448.46829AF4@vaxxine.com>
Source record: 46257

The eBay selling price surveys for vintage Tektronix , HP and GR test
equipment have been updated on my webpage.

http://www.vaxxine.com/phil/

Phil

_____
Posted Via Binaries.net = SPEED+RETENTION+COMPLETION = http://www.binaries.net

1417. New Web Site

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 06:09:41 UTC
From: joehawk@mac.com
Message-ID: <78a8e86f.0202162209.5c788522@posting.google.com>
Source record: 46258

Greetings,

We have started a Radio Monitoring Top Sites List that deals with all areas of radio monitoring. I invite you to check it out and hopefully list your site.

http://www.topsitelists.com/start/hawkins/

Best regards,

Joe Hawkins

1418. Re: Lithium Ion Battery charging circuit design?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 11:50:49 UTC
From: budgie <budgie@nowhere.cantech.net.au>
Message-ID: <3c6f972c.1746528@news.cantech.net.au>
Source record: 46259

On Sun, 17 Feb 2002 03:58:43 GMT, owner@pa-sitrep.com wrote:

>Okay, Frank. I'll check them out. I was hoping to find something I
>could build myself... I'd like to make a whole bunch of them.

The normal charge regime for Li-Ion and Li-Polymer types is current limited constant voltage. Charge termination is on current_draw_reduction, timer, or both.

There are some ASICs for single and multi-cell Li charging. Look up MAX1737, LT1511 and UCC3956 for starters.

The precautions required for Lithium-Ion/Li-P types are:

(a) limit charge voltage to spec (typically 4.1 - 4.2 per cell - refer manuf data)
(b) limit charge current to manuf figure - can vary from 1C up to 2C and beyong for latest types.
(c) limit discharge end voltage to manuf figure - use 3.0V as a cutoff if no data available. Below this, risks rise RAPIDLY.
(d) limit discharge current to manuf figure. Typically 2C is what I have seen.
(e) limit operation to 0degC to 50degC, esp charging.

There are ASICs for on-pack protection modules which cover (a) to (d). Look up Mitsumi MM1414 (4-cell) and also Seiko site for 1-2 cell configurations.

HTH

Peter

1419. Re: Replacement Part

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 12:23:29 UTC
From: Bill & Suzie Whatley <spud286@attbi.com>
Message-ID: <5hNb8.71924$fK1.4192873@rwcrnsc54>
Source record: 46260

The Philips (Infineon - Seimens) BFT92 is a drop in replacement in an SOT23 package.

You will have to locate a source for it but it is not a discontinued part.

73
WA5VRL
Willis

1420. Re: QRP kits/homebrews

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 12:43:25 UTC
From: Peter Rachow <peter.rachow@t-online.de>
Message-ID: <a4oan2$3oo$06$1@news.t-online.com>
Source record: 46261

Pete,

>1) What band or bands are best for DXing with a QRP rig?

I prefer the 20m-Band, due to the fact that you'll always find the condx (not only in the sun spot maximum) that allow you to have radio contacts to stations all over the world or on your own continent at least (if condxs are poorer). And the antenna is in reasonable dimensons for portable operation.

>2) What type of antenna? Long wire di-pole is OK.

The dipole ist best for 20,15 and 10 mtrs. This is due to comparatively low losses and an acceptable radiation pattern. But, mind the height of the aerial. Should be higher than half the wavelength you are using.

>3) Most of the kits I have seen are of "older" design.
>Are these still ok or are there newer designs that I have
>not seen yet? Are there good designs in the books
>and magazines that are not yet kits ? Where should I look?

Depends on what you expect: I appreciate the various books that are published by the ARRL: QRP-Notebook, QRP-Classics and so on. If you wnat to do good contacts, it is not neccessary to have a microcomputer-controlled all-frills hyper-expensive rig. If you want to have contacts in cw the circuits are fairly simple. If you want to operate in ssb, it gets a little bit more complicated. But, no problem at all. I have homemade ssb-rigs with 20 transistors and 2 or 3 ICs. That's all you need

>5) Is there a QRP rig that is good enough to double in the home shack?

I use a homebrew QRP-rig as my only station in here my home shack. No problem with my neigbours and rfi. And, lots of contacts on 20 mtrs currently.

hth

72

Peter
DK7IH
--
http://www.peter-rachow.de

1421. Wanted: 9 pin tube shield

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 13:16:16 UTC
From: David Warheit <dwarheit@nauticom.net>
Message-ID: <qqav6uce4i1k9j0fjm2mhlh7k5bhs6n0ab@4ax.com>
Source record: 46262

I am looking for a 9 pin metal tube shield to go over a 12BY7 driver tube in my transmitter. The one in the transmitter is missing. I will be glad to pay for it or barter for it. Of course I will will pay shipping. Can anyone help me out. Please email me.

TIA,

Dave

Posted Via Binaries.net = SPEED+RETENTION+COMPLETION = http://www.binaries.net

1422. Re: KVG filter specs.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 13:20:19 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <jmao4a.gr4.ln@my.linux.box>
Source record: 46263

In article <6447bcd3.0202160916.c179d1@posting.google.com>, Michael Black wrote:

> Has KVG changed their numbering system in recent years? Because
> that number doesn't look like anything I recognize. I just remembered
> that there is a list of KVG filters in the ARRL Electronics Data Book
> (admittedly, a quarter century old), and all the filters listed
> start with XF. The number that follows is the IF frequency, and
> then there's one or two letters that denote bandwidth (and there
> seems no patter).

I have the list of KVG filters from the ARRL Electronics Data Book
and the 1993 ARRL Handbook. As you say, the part number usually
gives a good indication of the frequency and bandwidth.

These filters were used in the first IF of Storno VHF radios
during the 1970's. It is possible that they were custom made
for Storno. They look like very high quality filters. I'm
hoping they will be wide enough for 6M FM.

I will report my findings, after I have made some measurements...

Thanks!

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

1423. Re: MRF138 - What are They Worth?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 15:02:43 UTC
From: r9c9nixon@mi9nd9spring.com
Message-ID: <3c6fc575.732062@news.mindspring.com>
Source record: 46265
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.misc,sci.electronics.design

melissa@NOSPAMdimensional.com (Melissa Liberty - Colorado) wrote:

>legg@magma.ca (R.Legg) bestowed such eternal wisdom upon us by saying from
><e715b5cc.0202160951.29f42468@posting.google.com>:
>
>>Melissa,
>>
>>In all fairness, you might find that more people are willing to pay
>>more money, if the quantity offered is two or more.
>>
>>Check your app notes to see how many designs are push-pull.
>>
>>Then consider the problem of maintenance spares when considering the
>>employment of old products.
>>
>>I think you could add info to your ad, indicating that more parts are
>>available to the winning bidder only, by pre-arrangement, or something
>>like that.
>
>Sounds like a good idea but I already have a bid on that auction and can't
>change it now.
>
>I was also trying to sell my CD of Microsoft Office 97 Pro on Ebay but they
>went and canceled my auction today, I'm not sure why yet, and it sounds like
>Microsoft is pulling the strings. The thing is, it was a legal copy (not
>pirated) that I bought on Ebay originally, used for a few years, then just
>deleted from my hard drive and wanted to sell. Doesn't Microsoft allow
>ownership of their software, or allow me to sell something I legally own? This
>stinks big time.
>
>--
>- Melissa
>Somewhere in Colorado

According to Microsoft, you do NOT "own" the software. Apparently,
they think that they retain rights to it after it is sold. This is
unlike books and recordings under identical copyright law. Hmmm. The
more I see, the better I like Linux.

Russ
"Two-fifteen, no ambulance needed!"
Subtract all nines to reply

1424. Re: QRP kits/homebrews

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 15:03:04 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u6vhlsphide1e3@corp.supernews.com>
Source record: 46266

Sorry if I keep coming back to this ... someone makes a comment and I think of something else...

You said:
> >3) Most of the kits I have seen are of "older" design.

I guess I wonder about that comment. There is a pretty big difference between the popular commercial rigs and most of the QRP rigs. The Yaecomwoods were designed to be all things to all people. They have a long list of features and frills that are sometimes nice, but make them complex to use. These features also make them power hungry and expensive for the performance level. The various QRP rigs generally have specific design points that are pretty focused. Each QRP rig out there has a particular audience, and many are the best around FOR THAT PARTICULAR PURPOSE.

Take the NorCal/Red Hot NC-20. This is a rig designed to have a dynamite receiver. It will NOTICEABLY outperform the $1000 category rice boxes in crowded situations at a tenth the price. I haven't had the pleasure of using a $3000 Yaecomwood, but the specifications indicate that some of them should have receiver performance similar to the NC-20.

However, the NC-20 sacrifices receive power consumption in order to get that performance. It uses almost twice the power of the K1, which could be an issue for backpacking, and the K1 is at the high end of most of the QRP rigs. Still, it's only just over a tenth the receive power use of an Icom 706.

I have a 706MkII and a K1 here in the shack. I use the K1 at least as much as the 706. There are some 706 features I miss on the K1, but the K1 has a couple of features that the Icom doesn't, and they are more important to me. The K1 has about a dozen items on it's menu, compared to, who knows, 100?, 200?, on the Icom. This makes the K1 a much more pleasant radio to operate.

Most of the QRP rigs use an SA602 or 612 mixer. This can be pretty bad in crowded conditions. In the K1, Elecraft took a lot of care in how they implemented it, so the performance is pretty similar to the 706. There are a lot of rigs, particularly with lower receive power consumption than the K1, which are going to suffer badly from IM. This isn't a huge problem on 20, but it can be on 40, and of course it's a disaster in Europe. But if you're going to be operating from the wilderness on 15, it just doesn't matter. Having less weight and fewer batteries is much more important.

So yes, rigs like the SMK-1, the Pixie, and the very low end rigs are going to involve a lot of sacrifice. But they are very small and lightweight, and very inexpensive. Probably, if I were to take a radio on a canoe trip, I'd be more inclined to take a $30 radio than a $1000 radio, even if it meant I

sacrifice a few frills.

So there really isn't a 'best' rig, but there may very well be a best rig for a particular set of circumstances.

One of the very nice things about the QRP kits is that the schematics are almost always online. You can download it, study it, compare it to the others, understand what design tradeoffs were made, and pick the rig whose designer most closely matches your preferences.

Peter indicated he uses a homebrew rig in the shack. If you're up for a bigger project, take a look at K8IQY's 2N2/40. It's hard to find a better performer on 40 meters. Yes, it's feature-poor, but it's homebrew - you can add what features you want. Looking for something a little simpler? K7QO has a series on homebrewing an SW-30+. There's no thrill like that first QSO on a homebrewed rig, but it is a LOT more work than a kit. On the other hand, it's easier to add the exact features you want and come up with a personalized radio that, FOR YOU, is the best possible.

..

1425. Re: Power Transformer current rating?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 15:08:36 UTC
From: dbagley@mindspring.com
Message-ID: <a4okqi$o29$1@slb4.atl.mindspring.net>
Source record: 46267

well it's 270 va or 270 watts so the formula is 270 watts devided by the
voltage 270/18=15 amps at 18 vac
"Frank Worm" <fworm@norpak.ca> wrote in message
news:3C6BB6A2.A431225F@norpak.ca...
> Hello All
> I have a Hammond class a power transformer.
> It's spec's are:
> 115V AC in
> 18V AC out
> 270VA
>
> How many amps can this xformer provide?
> Thanks in advance
> Regards
> Frank
>

1426. Re: Dumb Question, Answer Please.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 15:10:25 UTC
From: dbagley@mindspring.com
Message-ID: <a4okm1$7ok$1@slb1.atl.mindspring.net>
Source record: 46268

you're not running the power through the foot switch,
Just the delay coil control
should be fine
"Reticulum" <Cathexis@yourhaterols.com> wrote in message
news:3c65bb49.715124641@news.erols.com...
>
> Greetings,
>
> I run a FT-980 along with a FL2100-B amp. Although interface
cables
> do exist (I think), I don't have them. Instead I just flip the
operate/stndby
> switch ON/OFF as needed. Somewhere I read you could more easily just
> replace the jumper wire on the back with a foot pedal. Seems reasonable.
> Remember them saying you could get one at the Rat Shack, Now I went and
> got one(cat# 44-610d) but this looks like it'll burn in a second. The
cable is
> a simple mini-plug with the typical very fine stranded wrapped around an
even
> smaller wire "core". Obviously I would snip the miniplug and expose the
wires.
> I think you all know what I mean. I typically run about 500W PEP. Am I
gonna
> fry something (my foot? or worse my rig/amp) if I try and replace a 14AWG
> jumper with this flimsy thing? Maybe not, but would like a reply or two
from
> the ng first before I risk it. After all, we're talking about a grand
worth of
> shack equip. vs. a 4.00 switch. Feedback??
>
> Thx. es 73 de KG4JBM/ Andrew
>
> Reticulum
>
> Remove "your.hat" when replying via e-mail

1427. TI P8002 FET connections?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 16:39:10 UTC
From: la8ak.xnd@online.no
Message-ID: <3c6fdbc4.486699833@news.online.no>
Source record: 46269

found some Texas P8002 which I will use for active antenna, but can't find anything about connections using google, any help, pse?

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

1428. 1967 through 1977 old callbooks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 17:18:38 UTC
From: Jay Tuttle <tuttlej3@attbi.com>
Message-ID: <OBRb8.77927$AV5.379104@rwcrnsc51.ops.asp.att.net>
Source record: 46270

Help! I need an old callbook listing for current FCC exams I am taking. My call sign was WA7HYX. If you can provide this information please email me at tuttlej2@attbi.com

1429. Re: QRP kits/homebrews

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 17:21:33 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3C6FE69C.30389F55@sympatico.ca>
Source record: 46271

> In general I would recommend the QRP books from the ARRL.

See notes below.
Bill Kirkland VE3JHU

>
>
> 1) What band or bands are best for DXing with a QRP rig?

Right now I would recommend 10 m during the day.

>
> 2) What type of antenna? Long wire di-pole is OK.
> 3) Most of the kits I have seen are of "older" design. Are these still ok
> or are there newer designs that I have not seen yet? Are there good designs
> in the books and magazines that are not yet kits ? Where should I look?

Alot depends on the features you want.
The Optimized QRP transceiver by Roy LeWallen (excuse me if I didn't get it
right Roy) I think still stands the test of time. Excellent for design ideas
too.

Check out the K1 & K2 from Elecraft, http://www.elecraft.com/

QST periodically reviews QRP rigs/kits

I think one of the main rig manufacturers makes a QRP rig as well

>
> 4) Of the kits that are out there, is one better than the other?

You had better define your criteria here, eg.
sensitivity
dynamic range
selectivity
tx power
battery drain/life
"features"

for a few

>
> 5) Is there a QRP rig that is good enough to double in the home shack?

Depends on the performance you want in your home shack.
If you have a lot of other hams near buy, you might want a rig with good
dynamic range & intermod performance.

>
> 6) Is there a QRP newsgroup?
>
> Thanks in advance for any help that you may give.
>
> Pete
> KG6GRZ

1430. Re: Tube type Electronic TR Switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 17:35:08 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3C6FE9CB.5DD742C9@sympatico.ca>
Source record: 46272

Check out QEX May 1995 For an article on Electronic Antenna Switching
by Wes Hayward. He describes one for 100Ws.

David E Allen wrote:

> John_in_NJ <mankind@aol.com> wrote:
> : Does anyone have the ARRL Hints & Kinks book from 1968 or 1969 ? I need the
> : schematic for the electronic T/R switch. I build one back in the 70s and it
> : worked great for QSK operation.
>
> If you don't mind modifying your transmitter, you can add a simple circuit
> (pin diodes and fet) to the plate circuit of the output tube(s) that will
> pick off a signal for your receiver. (Here I am assuming tubes - real
> radios have tubes, right? :-)) Simple and works well. I also built
> the tube-type T/R switch, but haven't used it in a long time.
>
> dave allen, wb0taq, colorado springs

1431. Re: Lithium Ion Battery charging circuit design?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 17:54:43 UTC
From: Mark Hall <vze2mhvc@bellatlantic.net>
Message-ID: <3C6FED47.F42E9A2@bellatlantic.net>
Source record: 46273

The make chips to control the charger.. check out Maxim, Linear
Technology, and Texas Instruments.

owner@pa-sitrep.com wrote:

> Hello all,
>
> I have access to some used lithium ion batteries but have no way to
> charge them. I know that you can't use a regular charger because the
> batteries can explode.
>
> Does anyone know where I can find a schematic to build an ic
> controlled charging circuit for lithium ion batteries? I've tooled
> around on the internet looking for some plans but so far I haven't had
> any luck.
>
> THanks.
>
> 73
>
> David Kleber, KB3FXI
> www.PA-SitRep.com

1432. Re: QRP kits/homebrews

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 18:26:32 UTC
From: Mark Hall <vze2mhvc@bellatlantic.net>
Message-ID: <3C6FF4BA.723EF544@bellatlantic.net>
Source record: 46274

Some of those QRP rigs cost more than a regular rig, with receivers like those direct conversion QRP rigs of yesteryear. On the Cheap, I'd buy a used ICOM 735 (Limit the drive for QRP) and spend whatever's left in your budget on the antenna and rechargeable Lithium Ion Battery pack. In a "DX Crunch", you can wail on the drive and break thru for the initial contact. Some would call this QRP cheating, but as long as you maintain contact at QRP levels it might be considered legal (by some). Good news with Lithium Ion's is that they can be directly paralleled without problem (Unlike NiCd's). Each cell is 3.7 Volts (4.1V charged, 2.8V discharged), and a "D" cell is >4 Amp hours. Stack 4 in series (If you think a 735 can take 16 Volts), and 4 in parallel, we're talking >48 watt hours in a relatively small pack. With a proper charger (per cell constant current, then taper), you can recharge the pack from a cigarette lighter in an hour or so, or even a small Solar Array. Most say that each cell "Layer" should be charged independantly, although Maxim, Linear Technology, and TI make charger chips for LiO cells. A GaAs array puts out about 180W (+/-) per square meter in full Sunlight. Problem with Lithium Ion's is cell reversal which is caused by excessive discharge. Once they reach 2.8V they're functionally dead, and further discharge could wreck or severely life limit the pack. Discharge limiting the pack to 3 volts per series cell (12V for a stack of 4) should be safe.

We're talking QRO QRP on the cheap.

'73 KI4Z

Checkered Demon wrote:

> I am planning on passing my General test in a couple of weeks. Started
> dreaming of QRP transceivers for trips to the mountains. I have lots of
> questions. The size of the rig is not important. It should be on the higher
> end in the power department. i.e.. 5W is better than 350 mW . Battery life
> is not that important either.
>
> 1) What band or bands are best for DXing with a QRP rig?
> 2) What type of antenna? Long wire di-pole is OK.
> 3) Most of the kits I have seen are of "older" design. Are these still ok
> or are there newer designs that I have not seen yet? Are there good designs
> in the books and magazines that are not yet kits ? Where should I look?
> 4) Of the kits that are out there, is one better than the other?
> 5) Is there a QRP rig that is good enough to double in the home shack?
> 6) Is there a QRP newsgroup?
>
> Thanks in advance for any help that you may give.
>
> Pete

> KG6GRZ

1433. Re: 1975 ARRL MANUAL

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 18:55:29 UTC
From: Mark Hall <vze2mhvc@bellatlantic.net>
Message-ID: <3C6FFB84.92D93638@bellatlantic.net>
Source record: 46275

Forgot your Call?? Tsk. Tsk

'73 KI4Z

"Dennis@Lassetter .com" wrote:

> I need the above book in order to look up my old call letters. I had a
> novice lic. that I got in 1974 and have lost the licence and forgot the
> call letters.
> If you have one and do not want to sell it would you be so kind as to
> look this info. up in the book for me? It would be with my name and town
> name. Thanks for any help, I need his info real bad.
> Dennis Lassetter
> Newnan, Ga.
> Please send any info via e mail to:
> dcliff@webtv.net
>
> Dennis in Ga.

1434. Re: MRF138 - What are They Worth?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 20:09:14 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c700d69.1317234@news.freeserve.net>
Source record: 46276
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.misc,sci.electronics.design

On Sun, 17 Feb 2002 15:02:43 GMT, r9c9nixon@mi9nd9spring.com (Russell
C. Nixon) wrote:

>melissa@NOSPAMdimensional.com (Melissa Liberty - Colorado) wrote:
>
>>legg@magma.ca (R.Legg) bestowed such eternal wisdom upon us by saying from
>><e715b5cc.0202160951.29f42468@posting.google.com>:
>>
>>>Melissa,
>>>
>>>In all fairness, you might find that more people are willing to pay
>>>more money, if the quantity offered is two or more.
>>>
>>>Check your app notes to see how many designs are push-pull.
>>>
>>>Then consider the problem of maintenance spares when considering the
>>>employment of old products.
>>>
>>>I think you could add info to your ad, indicating that more parts are
>>>available to the winning bidder only, by pre-arrangement, or something
>>>like that.
>>
>>Sounds like a good idea but I already have a bid on that auction and can't
>>change it now.
>>
>>I was also trying to sell my CD of Microsoft Office 97 Pro on Ebay but they
>>went and canceled my auction today, I'm not sure why yet, and it sounds like
>>Microsoft is pulling the strings. The thing is, it was a legal copy (not
>>pirated) that I bought on Ebay originally, used for a few years, then just
>>deleted from my hard drive and wanted to sell. Doesn't Microsoft allow
>>ownership of their software, or allow me to sell something I legally own? This
>>stinks big time.
>>
>>--
>>- Melissa
>>Somewhere in Colorado
>
>According to Microsoft, you do NOT "own" the software. Apparently,
>they think that they retain rights to it after it is sold. This is
>unlike books and recordings under identical copyright law. Hmmm. The
>more I see, the better I like Linux.
>
Thats about the strength of it, You buy the "use" of the software, but

not the software its self. Is'nt Bill Gates an arrogant Bar steward.

1435. FS: RS 242 Antique German power triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 21:06:36 UTC
From: arnoldg@c2i.net
Message-ID: <3c701b6d.13756582@news1.c2i.net>
Source record: 46277

Hello,

I have several of this antique globe shape German triode in stock. It
is directly heated, an European 4-pin base and about 12W anode
dissipation. The valves are NOS, but the boxes are mostly in bad
shape. Pictures are available by e-mail.
Please contact me if you are interested.

Regards,

Arnold Goksyr

DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267
http://www.demostenes.no

Thousands of different valves in stock as well as
sockets,transformers,books,caps,resistors and
other components. Web site is updated every week.
You can order on-line.

1436. Re: Yaesu FT-757GX PLL jumping freq. (alignment hints ??)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 21:21:05 UTC
From: Another user <at@btinternet.com>
Message-ID: <a4p6s1$l9k$1@helle.btinternet.com>
Source record: 46278
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Is the frequency correct on transmit not out with the dial? if so leave
alone they do drift slightly has do most of the older radio's.

"Douglas Snowden" <snowden@peoplepc.com> wrote in message
news:u6jdna550lumce@corp.supernews.com...
> I have a FT757GX that will drift up and down a khz or so after
> it has been on for some time. Some times it takes quite a while
> (more than an hour) to drift, if at all. I suspect that since it is such
a
> compact radio the VCO is getting warm. I have a RF VTVM
> and freq counter. Before going in a trying an alignment, is there
> anything I should know or be wary of? I have the Tech supplement
> that gives an aligment procedure. Just trying to be cautious. Looks
> like just taking it apart might be a chore.
>
> 73 Doug N4IJ
>
>
>
>
>

1437. Re: Question on News Group protocol

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 21:24:09 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <a4p71mlqo1@helle.btinternet.com>
Source record: 46279

"Odd Eriksen" <odderi@pvv.ntnu.no> wrote in message
news:a4du37mie1@tyfon.itea.ntnu.no...
> JLB <jim.bolinger@lintek.aeroflex.com> wrote:
> > Should replys to a post be placed at the beginning or end of the
> > original post?
>
> -Common netiquette is to always put your comments below the original post.
> However, more than one good flamewar has come out of discussions regarding
> this practice... :-)

One problem with this is software like Outlook Express, that always puts the sig and cursor at the top, when replying. I get fed up cutting and pasting every time I post a response.

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.con
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

1438. Re: MRF138 - What are They Worth?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 21:34:27 UTC
From: legg@magma.ca
Message-ID: <e715b5cc.0202171334.557e9888@posting.google.com>
Source record: 46280
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components,sci.electronics.misc,sci.electronics.design

>
> Sounds like a good idea but I already have a bid on that auction and can't
> change it now.

You can always add info. This doesn't change what's being sold, or terms of sale.

RL

1439. HP 54601A ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-17 23:22:50 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <u70eqda886kg1c@corp.supernews.com>
Source record: 46281

This scope had been operating flawlessly until I left it on for a whole week, I normallly turn it off after I use it. It passes all its self test 100%. But when connected to a 100 KHz sine wave it messages "no signal found" and I see a broken sine wave pattern that can be changed somewhat by pushing sideways on the vertical postion control. This control can be rotated 360 degrees several times and it moves the base up and down and pusing it sideways affects the brken trace. It does this on all 4 channels and the probes are OK. Some time ago I lent it out and the guy arced one of the probe tips and I'm wondering if this could be thie cause?
I've not looked inside and wonder if anyone has any suggestions?
tnx
hank wd5jfr

1440. FS: 100's of TUBES $.35 each

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 00:25:45 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <dSXb8.2986$7Q6.165573@news1.east.cox.net>
Source record: 46282
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

Please email w6krc@arrl.net for detailed list.

1441. Re: Question on News Group protocol

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 00:54:40 UTC
From: Richard Crowley <rcrowley7@xprt.net>
Message-ID: <u70k6g34jtmgaf@corp.supernews.com>
Source record: 46283

"Leon Heller" wrote ...
> One problem with this is software like Outlook
> Express, that always puts the sig and cursor at
> the top, when replying. I get fed up cutting and
> pasting every time I post a response.

Yeah, I use OE also, but the cutting and pasting prompts you to cut out
everything except what you are responding to.

Be careful talking about OE, in many circles (dunno if this is one of them!)
it will get you flamed for not using a "real" newsreader. (I suppose they
mean those clunky old text-based things from the 1980s!)

RC

1442. Re: Fuse-type light bulb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 01:41:05 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <t1eu6u86rmt21cpjlpopcrvfh89l1o7bl9@4ax.com>
Source record: 46284

-Your Friend Bill- <none@coqui.net> wrote:

>Jim Adney wrote:

>> >http://www.vintage-electronics.net/
>>
>> I checked them out and they seem to carry the same "fuse lamps" that
>> everyone else carries. The bulbs I've been looking for resemble these
>> except that they have pointed ends, rather than flat. I believe the
>> correct name for this bulb is "festoon." These festoon lamps were used
>> in Fisher and Dynaco sets from the 60s.
>>
>> Does anyone know if this older style are still available anywhere?
>
>Sorry if I gave you a bad lead. Those lamps are common as dirt and I
>hope one of the other posters will give you a better lead. Sounds like
>the dome lamps in my 86 Isuzu Trooper. :-)

"Common as dirt"??? I certainly haven't found them anywhere in the
last 15 years, but I certainly haven't looked everywhere. I remain
hopeful that a source will surface somewhere. I think a lot of cars
use a festoon bulb as the dome light, but all the ones I've seen have
a glass bulb that is larger in diameter om the center than the end
contacts.

The bulbs I'm looking for look just like a pointy ended fuse: a
straight glass tube between the two end caps. The socket does not
resemble a fuse holder, however, so the more modern fuse lamps will
not work in there, they require the pointy ends.

-

Jim Adney jadney@vwtype3.org
Madison,Wisconsin USA

1443. Re: Fuse-type light bulb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 02:35:47 UTC
From: Gary Glaenzer <nobulltrans@irtc.net>
Message-ID: <6MZb8.1042$FVt.59703468@news2.randori.com>
Source record: 46286

Bill, Jim, and all;

those 'dome-light' bulbs are pretty high current devices

well over an amp

g

"-Your Friend Bill-" <none@coqui.net> wrote in message
news:3C706890.7375B1E9@coqui.net...
> Jim Adney wrote:
> >
> > -Your Friend Bill- <none@coqui.net> wrote:
> >
> > >Jim Adney wrote:
> >
> > >> >http://www.vintage-electronics.net/
> > >>
> > >> I checked them out and they seem to carry the same "fuse lamps" that
> > >> everyone else carries.
> >
> > The bulbs I'm looking for look just like a pointy ended fuse: a
> > straight glass tube between the two end caps. The socket does not
> > resemble a fuse holder, however, so the more modern fuse lamps will
> > not work in there, they require the pointy ends.
>
> They do special orders for what they don't have in stock. I recall
> seeing ones like you describe in auto instrument panels too.
> As a last resort...could you build up and file down some solder on the
> ends of a regular fuse lamp? Would it fit?
>
> -Bill
>
>

1444. Re: Fuse-type light bulb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 02:36:00 UTC
From: -Your Friend Bill- <none@coqui.net>
Message-ID: <3C706890.7375B1E9@coqui.net>
Source record: 46285

```
Jim Adney wrote:
>
> -Your Friend Bill- <none@coqui.net> wrote:
>
> >Jim Adney wrote:
>
> >> >http://www.vintage-electronics.net/
> >>
> >> I checked them out and they seem to carry the same "fuse lamps" that
> >> everyone else carries.
>
> The bulbs I'm looking for look just like a pointy ended fuse: a
> straight glass tube between the two end caps. The socket does not
> resemble a fuse holder, however, so the more modern fuse lamps will
> not work in there, they require the pointy ends.

They do special orders for what they don't have in stock. I recall
seeing ones like you describe in auto instrument panels too.
As a last resort...could you build up and file down some solder on the
ends of a regular fuse lamp? Would it fit?

-Bill
```

1445. Re: Question on News Group protocol

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 03:11:10 UTC
From: gdsnkl@bellatlantic.net
Message-ID: <3c707008.17793005@news.bellatlantic.net>
Source record: 46287

On Sun, 17 Feb 2002 16:54:40 -0800, "Richard Crowley"
<rcrowley7@xprt.net> wrote:

>Be careful talking about OE, in many circles (dunno if this is one of them!)
>it will get you flamed for not using a "real" newsreader. (I suppose they
>mean those clunky old text-based things from the 1980s!)
>
Forte Agent, or the freebie "Free Agent", are not clunky, and do a bit
more than pure text based systems.

Many viruses and worms are written for Outlook Express and its
automatic running of attached files (unless you disable certain
features).
Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

1446. waveguide to sma adapter loss?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 03:37:59 UTC
From: hexter@blazenet.net
Message-ID: <u70ton50m27t52@corp.supernews.com>
Source record: 46288

How much loss should I expect to see in a WR90 to SMA waveguide transition? I would like to insert a low noise amp into a waveguide section, and my amp is SMA in/out. the transition losses will be greater than my amps gain I would suspect.

1447. Re: Question on News Group protocol

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 03:42:21 UTC
From: -Your Friend Bill- <none@coqui.net>
Message-ID: <3C70781D.ED1BDE92@coqui.net>
Source record: 46289

"Gary S." wrote:
>
> On Sun, 17 Feb 2002 16:54:40 -0800, "Richard Crowley"
> <rcrowley7@xprt.net> wrote:
>
> >Be careful talking about OE, in many circles (dunno if this is one of them!)
> >it will get you flamed for not using a "real" newsreader. (I suppose they
> >mean those clunky old text-based things from the 1980s!)
> >
> Forte Agent, or the freebie "Free Agent", are not clunky, and do a bit
> more than pure text based systems.

I knew somebody would quickly mention Free Agent. I tried it and its
great for downloading binaries, but for regular news reading, I guess
gave up on the learning curve. I'll stick with my Newsreader For
Dummies, Netscape. Free Agent is nice and versatile if you like that
kind of thing to play with.
-Bill

1448. Re: QRP kits/homebrews

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 04:35:57 UTC
From: cooperjim@aol.com
Message-ID: <20020217233557.10837.00001913@mb-fs.aol.com>
Source record: 46290

Hi Pete

I have an Emtech NW40 that I Iike and just received the kit for the NW20. The web site is

emtech.steadynet.com

I have found that there is usually someone on 40 meters most of the time. Mostly west coast during the day, but at night I can cover the country with 5 watts.

If 20 meters is open, thats great, but its not always open. I am getting the NW20 to go with my PSK20 so I will have a CW/digital station hi hi. And go after DX when 20 is open.

A dipole antenna works great and if you have room go for it. I dont have room for one so I have been using magloop antennas. They work very well and they are small (5 foot diameter for 40 meters), but too heavy (uses copper pipe for the loop hi hi) and bulky (cant break it down) for backpacking.

The Emtech kits are nice, but they have some loose ends. Get a bunch of star lockwashers and use them when installing hardware. The board standoffs are a bear to install, I superglued them to the chassis which made it easier (doable?). Getting all the oscillators on the right side can be tricky. You cant turn off the RIT for true transceive without modification and the obvious one of shorting the RIT pot with a switch does not work well. (There is a JFET whose gate starts conducting current when you dont want it to.) I have posted a mod on the Emtech forum that improves the RIT problem (from 2 KHz to 200 Hz) but does not solve it.

The rig is clean and steady with very little drift. I like the variable bandpass crystal filter with the audio filter. It is easy to copy CW.

I got the NW20 in less than a week after I ordered it on line! Surprised me!

All the kits people have been talking about are good. The Elecraft has a great reputation, but is a bit too costly for me at one gulp.

Hope this is of some help.

73
Jim Cooper NE6O

>Subject: QRP kits/homebrews
>From: "Checkered Demon" oh_beer_thirty@hotmail.com
>Date: 2/16/02 8:01 AM !!!First Boot!!!
>Message-id: <elob8.307$mG7.170685731@newssvr21.news.prodigy.com>
>

>I am planning on passing my General test in a couple of weeks. Started
>dreaming of QRP transceivers for trips to the mountains. I have lots of
>questions. The size of the rig is not important. It should be on the higher
>end in the power department. i.e.. 5W is better than 350 mW . Battery life
>is not that important either.
>
>1) What band or bands are best for DXing with a QRP rig?
>2) What type of antenna? Long wire di-pole is OK.
>3) Most of the kits I have seen are of "older" design. Are these still ok
>or are there newer designs that I have not seen yet? Are there good designs
>in the books and magazines that are not yet kits ? Where should I look?
>4) Of the kits that are out there, is one better than the other?
>5) Is there a QRP rig that is good enough to double in the home shack?
>6) Is there a QRP newsgroup?
>
>Thanks in advance for any help that you may give.
>
>
>Pete
>KG6GRZ
>

1449. Re: Question on News Group protocol

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 05:37:37 UTC
From: notagain@worldnet.att.net
Message-ID: <Bq0c8.8586$BR3.474851@bgtnsc04-news.ops.worldnet.att.net>
Source record: 46291

In article <u70k6g34jtmgaf@corp.supernews.com>, "Richard Crowley" <rcrowley7@xprt.net>
wrote:
>"Leon Heller" wrote ...
>> One problem with this is software like Outlook
>> Express, that always puts the sig and cursor at
>> the top, when replying. I get fed up cutting and
>> pasting every time I post a response.
>
>Yeah, I use OE also, but the cutting and pasting prompts you to cut out
>everything except what you are responding to.
>
>Be careful talking about OE, in many circles (dunno if this is one of them!)
>it will get you flamed for not using a "real" newsreader. (I suppose they
>mean those clunky old text-based things from the 1980s!)
>
>RC
>
>
Try News Xpress:
http://www.malch.com/nxfaq.html

Regards

1450. Brainfart.....help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 05:58:23 UTC
From: Shadowwalker <shadow_walker301@yahoo.com>
Message-ID: <oq517ukv6lr261gnun9u4pdgnthc2bhiu9@4ax.com>
Source record: 46292

Got a question I should know the answer to but dont.....if a switch is rated @ 3 amps with 120VAC.......what would the rating be @ 12VDC? I'm thinking 30 amps (amperage times voltage = wattage, so 3amps X 120 VAC = 360 watts...........360 watts divided by 12 volts = 30 Amps) is this correct? Thanks for any help
Always keep your ass down, and your head even lower. 73's, Shadowwalker

1451. Re: Brainfart.....help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 06:10:38 UTC
From: -Your Friend Bill- <none@coqui.net>
Message-ID: <3C709ADE.C9724BF2@coqui.net>
Source record: 46293

Shadowwalker wrote:
>
> Got a question I should know the answer to but dont.....if a switch is
> rated @ 3 amps with 120VAC.......what would the rating be @ 12VDC? I'm
> thinking 30 amps (amperage times voltage = wattage, so 3amps X 120 VAC
> = 360 watts...........360 watts divided by 12 volts = 30 Amps) is this
> correct? Thanks for any help
> Always keep your ass down, and your head even lower. 73's, Shadowwalker

I think you would be best to stick with 3 amps at 12 volts. Switch
rating is normally a function of the contact size (ie resistance) and
the voltage rating isn't an issue when going lower.
73
-Bill

1452. Re: Brainfart.....help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 06:12:45 UTC
From: Dan Richardson <k6mhe@arrl.net>
Message-ID: <ok617uk604mmf2b7s53ui2fg1cv9auhe4r@4ax.com>
Source record: 46295

It is still 3 amps. It has to do with the contact area and how many electrons it will carry.

Look at it as wire size. For example a #10 wire is rated at 30 amps regardless of the voltage is being used.

Danny, K6MHE

On Mon, 18 Feb 2002 00:58:23 -0500, Shadowwalker <shadow_walker301@yahoo.com> wrote:

>Got a question I should know the answer to but dont.....if a switch is >rated @ 3 amps with 120VAC.......what would the rating be @ 12VDC? I'm >thinking 30 amps (amperage times voltage = wattage, so 3amps X 120 VAC >= 360 watts..........360 watts divided by 12 volts = 30 Amps) is this >correct? Thanks for any help
>Always keep your ass down, and your head even lower. 73's, Shadowwalker

1453. Re: Brainfart.....help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 06:20:04 UTC
From: Shadowwalker <shadow_walker301@yahoo.com>
Message-ID: <o6717usq6a995gnokpddncj6tceqqfs5m6@4ax.com>
Source record: 46294

On Mon, 18 Feb 2002 02:10:38 -0400, -Your Friend Bill-
<none@coqui.net> wrote:

>Shadowwalker wrote:
>>
>> Got a question I should know the answer to but dont.....if a switch is
>> rated @ 3 amps with 120VAC.......what would the rating be @ 12VDC? I'm
>> thinking 30 amps (amperage times voltage = wattage, so 3amps X 120 VAC
>> = 360 watts...........360 watts divided by 12 volts = 30 Amps) is this
>> correct? Thanks for any help
>> Always keep your ass down, and your head even lower. 73's, Shadowwalker
>
>I think you would be best to stick with 3 amps at 12 volts. Switch
>rating is normally a function of the contact size (ie resistance) and
>the voltage rating isn't an issue when going lower.
>73
>-Bill

K, thanks......have seen them list switches like 4amps @
125vac/28vdc.....didnt remember if there was a difference.....thanks a
lot Bill
Always keep your ass down, and your head even lower. 73's, Shadowwalker

1454. Re: Sound Card question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 06:42:39 UTC
From: gmendelson@bloomberg.com
Message-ID: <a4q7ov$md8$1@nardis.bfr.co.il>
Source record: 46296

JLB <jim.bolinger@lintek.aeroflex.com> wrote:
> Almost everyone, it seems, has a PC, particularly if you are already
> into electronics.

> Every PC has a sound card.

But most of them skimp on the A/D converter used for incoming signals.
Look at high end sound cards before you make a decision. I have one
made by TeraTec that costs about $75 (DMX Fire 1024) that has excelent
incoming A/D converters. They, and other vendors, have much better cards
selling for around $150.

Geoff.

--
Geoffrey S. Mendelson
Bloomberg L.P., BFM (Israel) 2 hours ahead of London, 7 hours ahead of New York.
Tel: 972-(0)3-754-1158 Fax 972-(0)3-754-1236 Email: gmendelson@bloomberg.com

1455. Re: Replacing an Icom-725 microphone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 07:06:33 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0202172306.1b089a51@posting.google.com>
Source record: 46197

"Ian White, G3SEK" <G3SEK@ifwtech.com> wrote in message
> More specifically, Icom use electret microphone elements that have the
> preamp built in.

Most all the new ones do. The older icom HM-7 hand mike used a dynamic element with a preamp in the mike. But the desk mikes made at the same time were electrets.
>
> >Others like kenwood build the mike preamp inside the radio.
>
> ...Because they use ordinary moving-coil (dynamic) elements with a
> lower output.

Well, in the radio or in the mike, they both need the mike preamps . I think the only reason a electret condensor is driving the newer icoms is they are using quite a bit of voltage on the elements to get a lot of gain.
I never could understand why icom wants the mike preamp outboard. Kenwoods method is much easier. Almost any mike will work as is on a kenwood. You need less preamp gain with a new icom than an old one though. My dynamic mike will drive the 706 to about half power on it's own. On my old 730, I bet it wouldn't do enough to move the meter without a preamp. I also run my preamp on the radio mike voltage. It's also very simple, with only one transister and a few parts.
I've also built them using 741 op amps and a few parts. MK

1456. Re: Brainfart.....help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 07:50:43 UTC
From: "John S. MacKay" <k35454@direct.ca>
Message-ID: <u71ct438psfffa@corp.supernews.com>
Source record: 46198

Don't overlook that on AC (60 cycles) the current turns itself off 60 times per second compared to the unidirectional flow on DC. Therefore the lowered voltage on DC is going to probably burn the contacts long before you get to higher amperage.. VE7AFN.
Shadowwalker <shadow_walker301@yahoo.com> wrote in message news:oq517ukv6lr261gnun9u4pdgnthc2bhiu9@4ax.com...
> Got a question I should know the answer to but dont.....if a switch is
> rated @ 3 amps with 120VAC.......what would the rating be @ 12VDC? I'm
> thinking 30 amps (amperage times voltage = wattage, so 3amps X 120 VAC
> = 360 watts...........360 watts divided by 12 volts = 30 Amps) is this
> correct? Thanks for any help
> Always keep your ass down, and your head even lower. 73's, Shadowwalker

---
Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.324 / Virus Database: 181 - Release Date: 2/14/02

1457. Latest project question...NiMH charging

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 08:41:39 UTC
From: "Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net>
Message-ID: <C9FC8142CB42DB04.9CB60F10584F2424.694055700AA5C383@lp.airnews.net>
Source record: 46199

Well, I've been toying with the idea of wind turbines for a while, since it always seems to be windy when I'm trying to get an antenna up. I finally got inspired while dismantling a salvaged 5.25" floppy drive, and built this:
http://www.kd5nrh.net/EmPower/windturbine.html

Of course, it's more of a working model and ongoing tinkering than anything terribly useful, but what the heck, I'd like to at least give it something practical to do until I get around to building something more powerful, so...

Is there a simple charging circuit out there that would allow me to charge a batch of NiMH AAs consecutively? Specifically, I'd like to be able to put, say, four batteries in it and have it charge one, then when that one's charged, start on the next, and so on. I'm fairly certain I could rig this up with four charging circuits, but I'd like to minimize part count, while still keeping it practical for later use with higher current (and voltage) sources.

Joe Bramblett, KD5NRH
kd5nrh@kd5nrh.net
http://www.kd5nrh.net

1458. Re: Replacing an Icom-725 microphone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 11:10:06 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <Dk5c8.72188$as2.12524925@news6-win.server.ntlworld.com>
Source record: 46200

> Well, in the radio or in the mike, they both need the mike preamps . I
> think the only reason a electret condensor is driving the newer icoms
> is they are using quite a bit of voltage on the elements to get a lot
> of gain.
> I never could understand why icom wants the mike preamp outboard.
> Kenwoods method is much easier. Almost any mike will work as is on a
> kenwood. You need less preamp gain with a new icom than an old one
> though. My dynamic mike will drive the 706 to about half power on it's
> own. On my old 730, I bet it wouldn't do enough to move the meter
> without a preamp. I also run my preamp on the radio mike voltage. It's
> also very simple, with only one transister and a few parts.
> I've also built them using 741 op amps and a few parts. MK
==========
For a universal homebrew mike/amp unit I would suggest you have a look at
QST Dec 1991 ,pages 26-27.

'A Quality Desk Mike for under $25' by Ron Klimas , WA1VRH.

Basically it is an electret element ,its signal amplified by a dual opamp
with adjustable gain .

It is powered by a separate 9V battery which is switched on/off with the PTT
.

With many transceivers nowadays having 9V or more available from the
multi-pin mike connector ,the separate battery wouldn't be necessary.
Also ,the unit can be made so small that it could be readily fitted in an
old handheld mike enclosure (ex CB ?)

For those not being able to trace the above article ,I'll be happy to send a
scanned image.

Frank gm0csz.kn6wh@ntlworld.com

1459. David Hendon to leave RA

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 14:02:49 UTC
From: ham <nospam@nospam.com>
Message-ID: <4Q7c8.9$kl2.968@news.dircon.co.uk>
Source record: 46201

```
check out STOP PRESS at www.qsl.net/g0crw
for more details
```

1460. Re: Brainfart.....help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 14:48:38 UTC
From: w9wi@linux1.localdomain
Message-ID: <slrna726lp.mg4.w9wi@linux1.localdomain>
Source record: 46202

On Mon, 18 Feb 2002 00:58:23 -0500, Shadowwalker
<shadow_walker301@yahoo.com> wrote:

>Got a question I should know the answer to but dont.....if a switch is
>rated @ 3 amps with 120VAC.......what would the rating be @ 12VDC? I'm
>thinking 30 amps (amperage times voltage = wattage, so 3amps X 120 VAC
>= 360 watts...........360 watts divided by 12 volts = 30 Amps) is this
>correct? Thanks for any help

Consider them two different ratings. Look at it this way: when the switch
is open, the current is zero and the voltage rating is the only one that
matters. Try to go past 120 volts, and it might arc over. (especially when
you try to change the switch from open to closed or vice-versa)

When the switch is closed, the *voltage* is zero and the *current* rating is
the only one that matters. Try to go past 3 amps, and things get hot.
Something might melt, or in extreme cases, catch fire. You're also likely
to damage the contacts when you try to change the switch from open to closed
or vice-versa.

(even if the switch is always closed, you do still have to worry about the
voltage rating. Because it could arc from the contacts to the handle or
frame of the switch. I doubt that would be a problem unless you gravely
violated the ratings, by running 1,000 volts or more.)
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

1461. Re: Brainfart.....help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 15:55:37 UTC
From: Mark Hall <vze2mhvc@bellatlantic.net>
Message-ID: <3C7122EB.12E2C767@bellatlantic.net>
Source record: 46203

Careful!!!! Often times the DC current rating is less than the AC current rating. No way would DC current rating ever be equal to AC current rating. Check the switch specs..

'73 KI4Z

Shadowwalker wrote:

> Got a question I should know the answer to but dont.....if a switch is
> rated @ 3 amps with 120VAC.......what would the rating be @ 12VDC? I'm
> thinking 30 amps (amperage times voltage = wattage, so 3amps X 120 VAC
> = 360 watts...........360 watts divided by 12 volts = 30 Amps) is this
> correct? Thanks for any help
> Always keep your ass down, and your head even lower. 73's, Shadowwalker

1462. Re: Brainfart.....help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 17:44:50 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <3C713D92.E00F10A0@dialpoint.net>
Source record: 46204

As others pointed out 3 amps max at any voltage and 120 volts max voltage.

The switches (and most other things with contacts such as relays) are rated for resistive loads. If inductive loads are used the contacts could have to be derated by as much as a factor of 10 for highly inductive DC loads. The inductive DC loads tend to cause an arc to be created and maintained. An AC supply will tend to not have as much of an arc.

Shadowwalker wrote:
>
> Got a question I should know the answer to but dont.....if a switch is
> rated @ 3 amps with 120VAC.......what would the rating be @ 12VDC? I'm
> thinking 30 amps (amperage times voltage = wattage, so 3amps X 120 VAC
> = 360 watts..........360 watts divided by 12 volts = 30 Amps) is this
> correct? Thanks for any help
> Always keep your ass down, and your head even lower. 73's, Shadowwalker

1463. Re: Brainfart.....help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 17:54:53 UTC
From: Gary Glaenzer <nobulltrans@irtc.net>
Message-ID: <Ndbc8.1147$FVt.72679514@news2.randori.com>
Source record: 46205

3 amps

it is a question of how much I-squared-R heat can be dissippated by the
contact area.

which is totally a function of current

"Shadowwalker" <shadow_walker301@yahoo.com> wrote in message
news:oq517ukv6lr261gnun9u4pdgnthc2bhiu9@4ax.com...
> Got a question I should know the answer to but dont.....if a switch is
> rated @ 3 amps with 120VAC.......what would the rating be @ 12VDC? I'm
> thinking 30 amps (amperage times voltage = wattage, so 3amps X 120 VAC
> = 360 watts..........360 watts divided by 12 volts = 30 Amps) is this
> correct? Thanks for any help
> Always keep your ass down, and your head even lower. 73's, Shadowwalker
>

1464. Re: Latest project question...NiMH charging

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-18 21:04:34 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <W1ec8.103395$H37.13871825@news2-win.server.ntlworld.com>
Source record: 46206

> Is there a simple charging circuit out there that would allow me to
> charge a batch of NiMH AAs consecutively? Specifically, I'd like to
> be able to put, say, four batteries in it and have it charge one, then
> when that one's charged, start on the next, and so on. I'm fairly
> certain I could rig this up with four charging circuits, but I'd like
> to minimize part count, while still keeping it practical for later use
> with higher current (and voltage) sources.
==========
Suggest you construct a 500 mA ,pulsed charger by means of a LM317 or LM7805 as a constant current source and an 'upstream ' 78xx ' device (or power transistor used as a switch) with a NPN transistor in the common lead ; the transistor being pulsed by a 555 timer set at approx 1 sec on , 2 secs. off (not critical).

Ideally a negative dV/dt detector is included (an opamp used as a differentiator) to stop pulsed charging when battery voltage tends to decrease (this is when battery is fully charged), followed by 10 -20 mA steady trickle charge (unlimited time).

Alternatively include a diode bridge opamp circuit with 1 diode used as temperature sensor strapped to battery. The other diode used as an ambient temperature reference
Pulsed charging should stop when battery temperature increases to a few degrees above ambient.
Followed by trickle charging as per above.

Alternatively include a 'few hours timer' ,say a 555 device ensuring a non-electrolytic capacitor is used to determine steady timing, and set time ,for pulsed charging ,such that battery temperature does not increase more than a few degrees above ambient. Again followed by trickle charging .
Note : For different battery capacities one should determine the different timing periods.

Of course all these operations can be done by a dedicated 'chip' , but for a homebrewer the 'separate components' route can give a satisfying result.

Good Luck

Frank gm0csz.kn6wh@ntlworld.com

1465. Homebrewed keys

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-19 00:53:59 UTC
From: gil <gilpi@mindspring.com>
Message-ID: <a4s7fk$4aq$1@slb6.atl.mindspring.net>
Source record: 46207

Any links on homebrewed keys or paddles? Would like to build a couple of them, I know I should be creative but its nice to see some plans.

Thanks in advance

Gil

1466. Re: David Hendon to leave RA

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-19 01:20:51 UTC
From: babel@fish.org
Message-ID: <ru937us9dacofh2g4tiuqdtlsgs8ccs05m@4ax.com>
Source record: 46208

On Mon, 18 Feb 2002 14:02:49 -0000, "ham" <nospam@nospam.com> wrote:

>check out STOP PRESS at www.qsl.net/g0crw
> for more details
>
This makes 2 or 3 posts referenceing 'qsl.net'. I've gone over there
and found _only_ a portal containing gambling links and some possibly
"adult" links. My guess is it's either a cross-post intended for
some 'amateur' porn group or someone is trying to shill hits on that
page.
it's a loser!

1467. Re: QRP kits/homebrews

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-19 01:32:15 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u73attgrkudf16@corp.supernews.com>
Source record: 46209

Mark brought up a few things...

"Mark Hall" <vze2mhvc@bellatlantic.net> wrote in message
news:3C6FF4BA.723EF544@bellatlantic.net...
> Some of those QRP rigs cost more than a regular rig, with
> receivers like those direct conversion QRP rigs of yesteryear.

Nowadays, only the very low end QRP rigs have DC receivers, and that is
something I would avoid.

BUT, some of those old DC rigs have quite a following and the used price
can be all out of proportion to the performance. The HW-9, for example, was
quite a nice rig in it's time, but newer radios will run circles around it
at a much lower price.

> On the Cheap, I'd buy a used ICOM 735

This I wouldn't do. All but the very low end (under $50) QRP rigs these
days include crystal filters, a must-have on today's bands. The crystal
filter for that 735 will cost more than many QRP rigs. And realistically,
if you are going to run any of the 100 watt rice boxes off batteries you
better be thinking in terms of lugging a car battery.

On the other hand, I have a number of rigs. As I mentioned earlier, I
probably use my K1 more often than my 706, and my 2N2/40 has a better
receiver than either, and my NC-20 better still.

BUT - if I were limited to only one radio, I'd probably choose the 706.
(In fairness, tho, I bought it a few years ago and paid three times the
price of the K1, today it's probably only twice.) The reason is that the
706 is very flexible. None of the other radios are reasonable to take
mobile, the 706's removeable front panel is a big win there, the 706 has VHF
so when I do take it mobiling, I don't have to take a separate 2 meter rig,
the 706 is the only rig I have for VHF CW and SSB, and once in a while I do
turn up the power, oh yeah, and I really like the DSP. So while I paid a
bunch of money for it, I got a very flexible rig. On the other hand, this
is NOT the radio to take backpacking. The receive current is almost an amp
(compared to 65 mA for the K1) and key down is around 9, even at low power,
climbs to almost 20 at full output).

> Lithium Ion Battery pack.

Can you actually buy cells? I hunted around the web and found nothing, nor
did I find anything at any of the normal electronics houses. It was my
understanding that manufacturers were reluctant to sell these except to
certified buyers because of the risk of explosion from an improper charging
circuit. If you go out and buy already assembled batteries, you might as

well buy a car for the price. I calculate almost 2 grand for enough to run my 706 for an evening. I can run my K1 for a week off a $50 gel cell, probably run the 706 for an hour if I do any transmitting at all.

..

1468. Re: David Hendon to leave RA

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-19 01:42:26 UTC
From: r9c9nixon@mi9nd9spring.com
Message-ID: <3c71ad20.3246969@news.mindspring.com>
Source record: 46210

That's funny, on Monday, 02/18/2002 at 20:40 EST I get to a webpage
owned by Al Waller and contains information of use to hams.

babel@fish.org wrote:

>On Mon, 18 Feb 2002 14:02:49 -0000, "ham" <nospam@nospam.com> wrote:
>
>>check out STOP PRESS at www.qsl.net/g0crw
>> for more details
>>
>This makes 2 or 3 posts referenceing 'qsl.net'. I've gone over there
>and found _only_ a portal containing gambling links and some possibly
>"adult" links. My guess is it's either a cross-post intended for
>some 'amateur' porn group or someone is trying to shill hits on that
>page.
>it's a loser!
>

Russ
"Two-fifteen, no ambulance needed!"
Subtract all nines to reply

1469. IC756PRO to Yaesu Quadra Amp band data interface?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-19 02:43:52 UTC
From: jflanders2@home.com
Message-ID: <3c71bb44.203427980@NEWS>
Source record: 46211

I am getting a Yaesu Quadra amp to use with my IC-756PRO exciter. I know they can be used together, and lots of guys are doing so. BUT - I have not heard of anyone making up a band data interface to go between them to set the quadra to the band the PRO is on automatically. It appears that most of the guys let the quadra count the freq to set it up, and others set the quadra manually.

It appears that a LM3914 in dot mode and a set of diodes in a matrix is most of what is needed for a true band-data interface. Has anyone tried to set this up?

Jerry W4UK

1470. Re: HP Oscillator from an HP5245L counter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-19 03:07:35 UTC
From: pooles@ozemail.com.au
Message-ID: <3c71c146.6862021@news.bigpond.com>
Source record: 46212
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Thu, 14 Feb 2002 15:50:59 GMT, "Rick Karlquist"
<richard@karlquist.removethis.com> wrote:

>Is he measuring the 1 MHz out directly at the oscillator pin? Or
>after the signal has passed through to the output connector?
>Regarding photos of a 10544: the 10544 and 10811 look identical.
>I believe there may have been predessors to the 10544 that also
>had the same packaging. I have only been with HP/Agilent since
>1979, when the 10544 was just going out of production. I think
>the 5245 was discontinued in the early 1980's. I remember they
>had a big celebration (?) about it.
>
>In any event, if his oscillator is truly 1MHz, I wouldn't expect
>much in the way of performance from it, whatever its model
>number is. Again, considering that something like 1/4 million
>10811's have been made, it should be easy enough to get one of
>those.
>
>Rick Karlquist N6RK
>
>
>"Rex" <notreally@hotmail.com> wrote in message
>news:u9pm6ucg0m0t6sfhsc6rja1lum18mf0se8@4ax.com...
>> On Thu, 14 Feb 2002 05:04:14 GMT, "Rick Karlquist"
>> <richard@karlquist.removethis.com> wrote:
>>
>> >OTOH,
>> >since the two are form, fit, and function interchangeable, if you
>> >have a 10544 socket, you can always plug in a 10811 if you
>> >come into possession of one.
>> >
>> >Rick Karlquist
>>
>> Rick,
>> His 10544 seems to have a 1 MHz output. Do you have any idea how
>> this could be? I sent him a picture of a 10544 and he says it looks
>> like what he has.
>>
>> -Rex
>> [rexa -TheAtSign- Next4dnaiLetters -period- (UsualComEnd)]<
>my_eemale_addy
>
>

My copy of Operating and Service Manual for HP5245L refers to the timebase oscillator employing *a 1-Mc piezo electric crystal*. There is a x10 multiplier circuit to generate a 10MHz signal for the rear panel *10-Mc out* this 10MHz is also used in the various plug-in units that were available.

For the standard timebase the stability specs are given as:
Aging rate - less than 3 parts in 10^9 per 24 hours.
Short term - less than 2 parts in 10^10 RMS with measurement averaging time of one second under constant environmental and line voltage conditions.

Not bad specs for it's era, I guess.

I don't know how this compares with your version of the 5245.

Steve (Cess) Poole

1471. Re: Homebrewed keys

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-19 03:47:20 UTC
From: SideBand <abNO8SPAMlr@csotbs.org>
Message-ID: <3C71CAC8.9010200@csotbs.org>
Source record: 46213

http://www.csotbs.org/ab8lr

follow the "CW Key" link.

gil wrote:

> Any links on homebrewed keys or paddles? Would like to build a couple of
> them, I know I should be creative but its nice to see some plans.
>
> Thanks in advance
>
> Gil

--
73 de AB8LR, Chris

http://csotbs.shopiwon.com/ for great deals on computer products.

1472. Re: Latest project question...NiMH charging

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-19 04:03:45 UTC
From: "news.bellatlantic.net" <vze3kq35@verizon.net>
Message-ID: <B8kc8.1751$No3.1245@nwrddc03.gnilink.net>
Source record: 46214

I thought it was a joke in QST a few years back, but there was an article capturing the power from an AM broadcast station and charging a battery.

Easier than reinventing the wheel -- check out Maxim's website.

"Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net> wrote in message news:C9FC8142CB42DB04.9CB60F10584F2424.694055700AA5C383@lp.airnews.net...
> Well, I've been toying with the idea of wind turbines for a while,
> since it always seems to be windy when I'm trying to get an antenna
> up. I finally got inspired while dismantling a salvaged 5.25" floppy
> drive, and built this:
> http://www.kd5nrh.net/EmPower/windturbine.html
>
> Of course, it's more of a working model and ongoing tinkering than
> anything terribly useful, but what the heck, I'd like to at least give
> it something practical to do until I get around to building something
> more powerful, so...
>
> Is there a simple charging circuit out there that would allow me to
> charge a batch of NiMH AAs consecutively? Specifically, I'd like to
> be able to put, say, four batteries in it and have it charge one, then
> when that one's charged, start on the next, and so on. I'm fairly
> certain I could rig this up with four charging circuits, but I'd like
> to minimize part count, while still keeping it practical for later use
> with higher current (and voltage) sources.
>
>
> Joe Bramblett, KD5NRH
> kd5nrh@kd5nrh.net
> http://www.kd5nrh.net

1473. Re: What epoxy/adhesive should I use?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-19 04:08:44 UTC
From: Marc <marc_k@NoSpamreva.sixgirls.org>
Message-ID: <u73juc2h178ua2@corp.supernews.com>
Source record: 46215

news.bellatlantic.net <vze3kq35@verizon.net> wrote:
> There are paste form two part epoxies -- used in marine applications -- some
> of them will dry under water! I have had pretty good success with forming
> parts with them. I have also used them to make good screw mounts in
> materials like wood where you can tap the polyester resin to a much higher
> degree of precision than wood.

> "Jason Hsu" <jason_hsu@my-deja.com> wrote in message
> news:f7d9a152.0202121529.25637e84@posting.google.com...
>> I am working on a homebrewed 1/4 wavelenth HT antenna with an SMA
>> connector.
>>
>> I tried using silicone to hold the copper wire into the SMA connector
>> (to hold the wire in place so that it wouldn't fall out). It didn't
>> work. (I should save the silicone for repairing minor headlight
>> damage, which is what I bought it for in the first place.)
>>
>> So what kind of epoxy or adhesive should I use instead? I think I
>> need something that lacks viscosity at first, becomes very hard when
>> solidified, and doesn't allow air pockets to form inside.
>>
>> Jason Hsu, AG4DG
>> jason_hsu_802701@@@yahoo.com

Epoxy putty is a good solution for your problem.
I realize that you don't think that you want a putty consistancy, but it's
easier to work with in most cases.

1474. Re: QRP kits/homebrews

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-19 04:32:38 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3C71D566.8F8523D4@sympatico.ca>
Source record: 46217

I believe the R2 receiver by Rick Campbell obtains pretty respectable side band rejection for a direct conversion receiver. In this case two receive chains are used to generate what we refer to as I and Q channels (Inphase and Quadrature). By suitably combining these two channels together one obtains either the upper or lower side band. I believe the R2 is in relatively recent ARRL handbooks.

Here is a reference from a quick search on the web.:
http://engphys.mcmaster.ca/~elmer101/r2atxt.html

Bill Kirkland

xpyttl wrote:

> Mark brought up a few things...
>
> "Mark Hall" <vze2mhvc@bellatlantic.net> wrote in message
> news:3C6FF4BA.723EF544@bellatlantic.net...
> > Some of those QRP rigs cost more than a regular rig, with
> > receivers like those direct conversion QRP rigs of yesteryear.
>
> Nowadays, only the very low end QRP rigs have DC receivers, and that is
> something I would avoid.
>
> *BUT*, some of those old DC rigs have quite a following and the used price
> can be all out of proportion to the performance. The HW-9, for example, was
> quite a nice rig in it's time, but newer radios will run circles around it
> at a much lower price.
>
> > On the Cheap, I'd buy a used ICOM 735
>
> This I wouldn't do. All but the very low end (under $50) QRP rigs these
> days include crystal filters, a must-have on today's bands. The crystal
> filter for that 735 will cost more than many QRP rigs. And realistically,
> if you are going to run any of the 100 watt rice boxes off batteries you
> better be thinking in terms of lugging a car battery.
>
> On the other hand, I have a number of rigs. As I mentioned earlier, I
> probably use my K1 more often than my 706, and my 2N2/40 has a better
> receiver than either, and my NC-20 better still.
>
> *BUT* - if I were limited to only one radio, I'd probably choose the 706.
> (In fairness, tho, I bought it a few years ago and paid three times the
> price of the K1, today it's probably only twice.) The reason is that the
> 706 is very flexible. None of the other radios are reasonable to take
> mobile, the 706's removeable front panel is a big win there, the 706 has VHF

> so when I do take it mobiling, I don't have to take a separate 2 meter rig,
> the 706 is the only rig I have for VHF CW and SSB, and once in a while I do
> turn up the power, oh yeah, and I really like the DSP. So while I paid a
> bunch of money for it, I got a very flexible rig. On the other hand, this
> is NOT the radio to take backpacking. The receive current is almost an amp
> (compared to 65 mA for the K1) and key down is around 9, even at low power,
> climbs to almost 20 at full output).
>
> > Lithium Ion Battery pack.
>
> Can you actually buy cells? I hunted around the web and found nothing, nor
> did I find anything at any of the normal electronics houses. It was my
> understanding that manufacturers were reluctant to sell these except to
> certified buyers because of the risk of explosion from an improper charging
> circuit. If you go out and buy already assembled batteries, you might as
> well buy a car for the price. I calculate almost 2 grand for enough to run
> my 706 for an evening. I can run my K1 for a week off a $50 gel cell,
> probably run the 706 for an hour if I do any transmitting at all.
>
> ..

1475. Re: Homebrewed keys

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-19 04:35:37 UTC
From: Steve Bauder <sbauder@wwt.net>
Message-ID: <3C71D619.CB5B974F@wwt.net>
Source record: 46216

You'll find plans for both single and double lever paddles on the NorCal
website.
http://www.fix.net/~jparker/norcal.html

Steve, nx9z

gil wrote:

> Any links on homebrewed keys or paddles? Would like to build a couple of
> them, I know I should be creative but its nice to see some plans.
>
> Thanks in advance
>
> Gil

1476. Re: QRP kits/homebrews

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-19 06:13:48 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <a4sqkt$m9$1@nntp9.atl.mindspring.net>
Source record: 46218

The R2 is indeed a direct conversion reciever, suitable for anywhere between 1 Mhz and 500 MHz as is, more or less. You have to provide the LO and the RF 90 degree splitter for the band you want to actually use it on.

==========

This website has a kit for the R2. At the moment, it shows the miniR2 as avaliable and I am still waiting for it to show the NEW R2PRO which according to the website has even better performance.....

http://www.bright.net/~kanga/kanga/kk7b.htm

Here are a couple of websites where the R2 was connected to a DSP system which allows multiple modes and other sophisticated tricks. 'Way beyond the needs of a "simple" homebrew rig, but a very interesting idea.

http://www.wwc.edu/~frohro/R2_DSP/R2-DSP.html

http://www.apriori.net/~paz/r2dsp/r2dsp.html

==========

Still, for a good dynamic range homebrew, the basic R2 or miniR2 are hard to beat especially considering how easy it is to set them to anywhere between 1 Mhz and 500 MHz. Add the T2 transmit board (on the Kanga website) and you have a basis for a very compact SSB or CW system.

Jim Pennell
N6BIU

1477. Re: HP Oscillator from an HP5245L counter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-19 07:33:30 UTC
From: Rex <notreally@hotmail.invalid>
Message-ID: <4sv37u8ktvldm48u6a0msuc1d775fjeihu@4ax.com>
Source record: 46219
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Tue, 19 Feb 2002 03:07:35 GMT, pooles@ozemail.com.au wrote:

>My copy of Operating and Service Manual for HP5245L refers to the
>timebase oscillator employing *a 1-Mc piezo electric crystal*. There
>is a x10 multiplier circuit to generate a 10MHz signal for the rear
>panel *10-Mc out* this 10MHz is also used in the various plug-in units
>that were available.
>
>For the standard timebase the stability specs are given as:
>Aging rate - less than 3 parts in 10^9 per 24 hours.
>Short term - less than 2 parts in 10^10 RMS with measurement averaging
>time of one second under constant environmental and line voltage
>conditions.
>
>Not bad specs for it's era, I guess.
>
>I don't know how this compares with your version of the 5245.
>
>Steve (Cess) Poole
>
>

The discussion arose because this particular 5245 seems to have a
10544 oven oscillator. No 5245 that I have seen has that
configuration. The 10544's that were used in HP equipment that came
(to my knowledge) a bit later than the 5245, all had 10 MHz output.
The 5245 that I have has a 1 MHz crystal in a cylindrical oven with
an external oscillator board. As you mention this is followed by a
board that multiplies the 1 MHz up to 10 MHz. I think this is the
standard configuration as you were describing.

The particular 5245 of the OP seems to be unusual in that it has a
10544 for a timebase, and that 10544 is unusual by having a 1 MHz
output.

The poster wanted to use the timebase - out of the counter - as a 10
MHz reference. It's been pointed out that even a standard 10 MHz
10544 wouldn't be that great compared to more recent 10 MHz
oscillators.

Just trying to clarify what we were talking about.

-Rex, KK6MK
[rexa -TheAtSign- Next4dnaiLetters -period- (UsualComEnd)]< my_eemale_addy

1478. Re: What epoxy/adhesive should I use?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-19 14:09:09 UTC
From: Dick <dick@langwang.demon.co.uk>
Message-ID: <W3gA3AAFylc8Ew4t@langwang.demon.co.uk>
Source record: 46232

>> "Jason Hsu" <jason_hsu@my-deja.com> wrote in message
>> news:f7d9a152.0202121529.25637e84@posting.google.com...
>>>
>>> I tried using silicone to hold the copper wire into the SMA connector
>>> (to hold the wire in place so that it wouldn't fall out). It didn't
>>> work. (I should save the silicone for repairing minor headlight
>>> damage, which is what I bought it for in the first place.)
If I remember correctly don't SMA connectors use PTFE (Teflon) as their
insulator material, if so you might have a bit of a problem getting anything to
stick to that !!
>>> So what kind of epoxy or adhesive should I use instead? I think I
>>> need something that lacks viscosity at first, becomes very hard when
>>> solidified, and doesn't allow air pockets to form inside.
>>>
Hope I'm not teaching my grandmother to suck eggs but I used to find
standard (2 tube) epoxy would do just this if you gently cured it with heat
after joining. I used squeeze hardener & resin onto piece of card, warm
gently under a lamp for 2-3 minutes until they both became clear & runny &
then apply to the joint. If you continued to cure the work piece (put 2-3" in
front of 60w bulb) any bubbles formed in the mix would float to the surface
while the mix was still liquid & before it set hard & clear (1 hours curing was all
you needed). Maybe they've improved (!) epoxy cement so that it doesn't
behave like this nowadays .... Ah well, back to that vibrating coherer that
needs fixing ..... !!!!
--
Dick
GM0MNL

1479. Re: waveguide to sma adapter loss?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-19 15:21:43 UTC
From: Bob Liesenfeld <robert.liesenfeld@neicoltech.org>
Message-ID: <3C726D87.B4F57493@neicoltech.org>
Source record: 46220

gudmundur wrote:

> How much loss should I expect to see in a WR90 to SMA waveguide
> transition? I would like to insert a low noise amp into a waveguide
> section, and my amp is SMA in/out. the transition losses will be
> greater than my amps gain I would suspect.

Hi,
When I worked in satcom we used a lot of these with WR-75. The loss
in the transistion was minimal (<1dB) assuming a well made transition
and flanges. The flex coax that was frequently used from the SMA
connector was the real killer. We used pretty good commericialy made
stuff and found a 3ft length had about 2.5dB loss at 14GHz.
.144" semirigid did much better.

Bob WB0POQ

1480. Re: Homebrewed keys

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-19 18:59:23 UTC
From: k5dh@raytheon.com
Message-ID: <fgxc8.297$Bd4.3040@dfw-service2.ext.raytheon.com>
Source record: 46221

In article <a4s7fk$4aq$1@slb6.atl.mindspring.net>, gilpi@mindspring.com says...
>
>Any links on homebrewed keys or paddles? Would like to build a couple of
>them, I know I should be creative but its nice to see some plans.

Not really a set of plans, but it might give you some ideas:

http://www.qsl.net/k5dh/paddles.html

73,
Dean, K5DH
Visit my amateur radio web site at http://www.qsl.net/k5dh

1481. Re: Brainfart.....help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-19 20:55:57 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C72BBDD.17FC260C@clifto.com>
Source record: 46222

Shadowwalker wrote:
> Got a question I should know the answer to but dont.....if a switch is
> rated @ 3 amps with 120VAC.......what would the rating be @ 12VDC?

A connected switch can be compared in this context to a piece of wire.

If a piece of wire is rated 3 amps with 120VAC, what would the current
rating be at 12VDC? (Clue: can a #30 wire handle 30 amps when you use
it at low voltage?)

--
Britney Spears' Guide to Semiconductor Physics
<http://britneyspears.ac/lasers.htm>

1482. Re: Fuse-type light bulb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-19 23:57:45 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <52h37uggekhis60u4qnhsh4558dmngh4dn@4ax.com>
Source record: 46223

-Your Friend Bill- <none@coqui.net> wrote:

>Jim Adney wrote:

>> The bulbs I'm looking for look just like a pointy ended fuse: a
>> straight glass tube between the two end caps. The socket does not
>> resemble a fuse holder, however, so the more modern fuse lamps will
>> not work in there, they require the pointy ends.
>
>They do special orders for what they don't have in stock. I recall
>seeing ones like you describe in auto instrument panels too.
>As a last resort...could you build up and file down some solder on the
>ends of a regular fuse lamp? Would it fit?

I could certainly do that. Do you think the bulb would tolerate it?

-

Jim Adney jadney@vwtype3.org
Madison,Wisconsin USA

1483. Re: Fuse-type light bulb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-20 00:13:35 UTC
From: -Your Friend Bill- <none@coqui.net>
Message-ID: <3C72EA2F.EB2375D4@coqui.net>
Source record: 46224

Jim Adney wrote:
>
> -Your Friend Bill- <none@coqui.net> wrote:
>
> >Jim Adney wrote:
>
> >> The bulbs I'm looking for look just like a pointy ended fuse: a
> >> straight glass tube between the two end caps. The socket does not
> >> resemble a fuse holder, however, so the more modern fuse lamps will
> >> not work in there, they require the pointy ends.
> >
> >They do special orders for what they don't have in stock. I recall
> >seeing ones like you describe in auto instrument panels too.
> >As a last resort...could you build up and file down some solder on the
> >ends of a regular fuse lamp? Would it fit?
>
> I could certainly do that. Do you think the bulb would tolerate it?

Your guess is as good as mine. The filament may or may not be enclosed
in its own sealed glass tube and the ends are just tacked on....you
might be able to glob on some solder without heating it too much.
-Bill

1484. Re: Brainfart.....help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-20 02:41:02 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <a2Ec8.68237$YA2.8676804@news11-gui.server.ntli.net>
Source record: 46225

> > Got a question I should know the answer to but dont.....if a switch is
> > rated @ 3 amps with 120VAC.......what would the rating be @ 12VDC?
==========
The switch contact current rating is a matter of maximum permissible
AVERAGE current.
The average amplitude of a sine is its peak value divided by PI.

So when the AC contact rating is 3 Amps this is the rms value of the current
,its peak value being 1.41*3 equals 4.2 . Hence the average value is 4.2
divided by PI equals 1.34 Amperes .

So the contact rating @ 12 V-DC would be less than 1.4 Amperes (valid for a
purely resistive load)
With an inductive load the induction voltage occurring when the contacts
open , will make it necessary to further de-rate the contacts ,unless the
contacts are bridged by a suitable capacitor.
Example : A (now old fashioned) petrol engine ignition coil/ contact
breaker system .

Frank gm0csz.kn6wh@ntlworld.com

1485. Re: Brainfart.....help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-20 02:53:40 UTC
From: Gary Glaenzer <nobulltrans@irtc.net>
Message-ID: <TcEc8.30$HIN1.2752625@news2.randori.com>
Source record: 46226

"Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote in message
news:a2Ec8.68237$YA2.8676804@news11-gui.server.ntli.net...
>

> With an inductive load the induction voltage occurring when the contacts
> open , will make it necessary to further de-rate the contacts ,unless the
> contacts are bridged by a suitable capacitor.
> Example : A (now old fashioned) petrol engine ignition coil/ contact
> breaker system .
>

'capacitor' ???

everyone knows them thar critters are called 'condensers' !

Goober Pyle

1486. Re: Question on News Group protocol

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-20 03:12:10 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <euEc8.1280$eI1.347090@monger.newsread.com>
Source record: 46227

"Leon Heller" <leon_heller@hotmail.com> wrote in message
news:a4p71mlqo1@helle.btinternet.com...
>
> "Odd Eriksen" <odderi@pvv.ntnu.no> wrote in message
> news:a4du37mie1@tyfon.itea.ntnu.no...
> > JLB <jim.bolinger@lintek.aeroflex.com> wrote:
> > > Should replys to a post be placed at the beginning or end of the
> > > original post?
> >
> > -Common netiquette is to always put your comments below the original
post.

Welll...it depends on the group.

Some groups insist on top posting, others insist on the bottom. Both quote
netiquette...so take your pick.

The common sense approach, is to instert answers to questions, or statements
below each statement instead of top, or bottom posting.

> > However, more than one good flamewar has come out of discussions
regarding
> > this practice... :-)

Some get down right hostile. One such group is supposed to be to help
newbies on the net, but ... <:-))

>
> One problem with this is software like Outlook Express, that always puts
the
> sig and cursor at the top, when replying. I get fed up cutting and pasting
> every time I post a response.
>

Check...I know the earlier versions gave the options of either top or
bottom.
I haven't been able to find any option in 6.0 and up. My version is 6.02.

As for those who say get a real reader...Use what ever you want, what ever
is handy, or any other reason you care to use.

The reason so many viruses, worms, and scripts show up in IE and OE are
because they are the most used and the writters expect to get the most
mileage by writting for them.

Above all Include enough of the post being answered so people know to whom
you are talking. Far too many assume that the order in which the posts fall

should show should show the posting order. If they really do fall in order
it is just by accident, or the posts were all made on the same server. It's
not uncommon to see the question follow several answers in many newsgroups.
--
Roger (K8RI EN73)
WWW.RogerHalstead.com
N833R, World's Oldest Debonair? S#CD-2

> Leon
> --
> Leon Heller, G1HSM leon_heller@hotmail.con
> http://www.geocities.com/leon_heller
> Low-cost Altera Flex design kit: http://www.leonheller.com
>
>
>
>

1487. Re: Homebrewed keys

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-20 03:33:25 UTC
From: aa1ll@email.com
Message-ID: <e85be400.0202191933.7662f7ef@posting.google.com>
Source record: 46228

"gil" <gilpi@mindspring.com> wrote in message
news:<a4s7fk$4aq$1@slb6.atl.mindspring.net>...
> Any links on homebrewed keys or paddles? Would like to build a couple of
> them, I know I should be creative but its nice to see some plans.
>
> Thanks in advance
>
> Gil

Gil, as W2OPB 44 years ago when I was 13, I made keys, especially bugs. I used to make them out of pine boards, brass shim stock, Erector Set parts, razor blades and popsicle sticks. There was an article in QST in the 50's by Katashi Nose, KH6IJ, on how to make a bug and if anyone out there has the article I'd pay for a copy. I have made a few sideswipers lately out of hacksaw blades:

http://www.qsl.net/aa1ll/sswipe6.jpg

The thread to the NB6M key is good--it might make a good sideswiper:

http://www.fix.net/~jparker/norcal/paddle/nb6m.htm

Keep in touch about making keys!! Use aa1ll@email.com

73, Paul, AA1LL
Mason, NH
http://www.qsl.net/aa1ll

1488. Re: waveguide to sma adapter loss?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-20 03:57:27 UTC
From: aa1ll@email.com
Message-ID: <e85be400.0202191957.6b8440bd@posting.google.com>
Source record: 46229

hexter@blazenet.net (gudmundur) wrote in message
news:<u70ton50m27t52@corp.supernews.com>...
> How much loss should I expect to see in a WR90 to SMA waveguide
> transition? I would like to insert a low noise amp into a waveguide
> section, and my amp is SMA in/out. the transition losses will be
> greater than my amps gain I would suspect.

The transition loss would probably be less than 0.5 dB at 10GHz. If you connect the amplifier input right to the transition without cable you won't suffer more than a dB increase in noise figure, and if you have say 15dB gain, the transmission line dissipation loss (<2dB) of coax several feet long won't impact your system NF more than hundredths of a dB. Make sure you have adequate amplifier gain and of course real good noise figure.

There may be an impedance matching issue at the input of the amplifier--an LNA's noise figure is usually sensitive to source VSWR which in your case will include maybe a 2:1 mismatch for the waveguide plus transition cascade, or worse, depending on what the w/g is connected to. You may want to consider a tuning screw, which some transitions have, between the coax transition probe which sticks into the WR-90 (E-field probe) and the waveguide end. The screw could be like a 2-56 at lambda/8 from the guide end wall. You braze a 2-56 threaded brass bushing onto a hole drilled in the WR90 .900 inch dimension. No real need to silver plate; copper oxide is a fine dielectric--just clean it before use. You can actually make your own transition, they're not difficult if you're narrow band [<2%].

73, Paul, AA1LL
Mason, NH
http://www.qsl.net/aa1ll

1489. Re: waveguide to sma adapter loss?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-20 08:17:39 UTC
From: Rex <notreally@hotmail.invalid>
Message-ID: <mrl67u01u8seoluiocmqd3ljh2nmfstkp4@4ax.com>
Source record: 46230

On 19 Feb 2002 19:57:27 -0800, aa1ll@email.com (Paul Gili) wrote:

>hexter@blazenet.net (gudmundur) wrote in message
news:<u70ton50m27t52@corp.supernews.com>...
>> How much loss should I expect to see in a WR90 to SMA waveguide
>> transition? I would like to insert a low noise amp into a waveguide
>> section, and my amp is SMA in/out. the transition losses will be
>> greater than my amps gain I would suspect.
>
>The transition loss would probably be less than 0.5 dB at 10GHz.

Lets assume that you have a good preamp < 1 dB NF. Its no doubt
going to be a microstrip design. Somehow you are going to have to
couple the signal into the input microstrip. Assuming you have some
kind of horn antenna or feed into a waveguide, you are going to have
to couple the signal from the guide to the microstrip. This will no
doubt be via a probe into the guide connected to the microstrip.

If you build a custom design with the preamp bound to the guide, as
good as can be, you will have some minor loss (<< 1 dB). If the
standard waveguide transition is designed well, using that should
only differ by the loss from one or two sma connections. This is
pretty small if the parts are good and I wouldn't worry about it.

I suppose there is some way you could tweak things for the best
noise figure match, but if there was an advantage vs. 50 ohms it
should be small and a bit of tuning on the transition may do as
much.

So the preamp will definately help if it has a decent noise figure
and moderate gain. A standard transition should be fine if kept
close to the preamp with minimum connections.

-Rex, kk6mk

[rexa -TheAtSign- Next4dnaiLetters -period- (UsualComEnd)]< my_eemale_addy

1490. Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-20 08:28:49 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C735F09.7FE@pop.removethistomailme.net>
Source record: 46231
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett wrote:
>
> John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3C5DED79.17B@pop.removethistomailme.net>...
> > Mike Monett wrote:
>
> > > Yes, please post - we have been waiting to see them!
>

FYI to all: the current schematics are now posted at
http://www.qsl.net/ke5fx/synth.html, along with my latest parallel-port
control software and (Win32) source.

These diagrams will be used to spin a prototype PC board that should be
ready for testing in a few weeks. More to come!

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1491. Visual Basic and Sound Cards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-20 13:30:15 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0202200530.754d97dc@posting.google.com>
Source record: 46233

I posted this question to comp.lang.visual.basic, but haven't got an answer yet. There are enough people that read this group that I thought it would be worth a try...

What I would like to do is capture input to the sound card and import it into Microsoft Excel, possibly with a Visual Basic macro.

I have seen how to access the sound card, and how to write macros, but nothing on how to access the sound card from a macro. Or am I just not using the right words in the web browser?

(My opinion of the web is that it is like a huge library where all the books are not sorted by title or subject, but by each of the individual words inside the books.)

Jim
N8EE

1492. PIC Sources?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-20 14:26:41 UTC
From: n5kzw@arrl.net
Message-ID: <3c73b082.492991114@news.ev1.net>
Source record: 46234

I came across a PICSTART Plus programmer and an EPROM eraser in my stash of "Things I'd like to play with someday". I've downloaded the latest code for the programmer, and now I need to get a PIC17C44 to replace the one in the programmer.

Can anyone recommend a favorite source for PICs (preferrably one that does not have a minimum order policy or a service charge for orders below $25)?

On the same lines, can anyone point me at a low-cost PIC prototyping board?

TIA,
Ed

1493. WANTED: Triad M-15 modulation transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-20 15:58:55 UTC
From: Chuck O'Neal <coneal@ultranet.com>
Message-ID: <a50h72$5jm$1@bob.news.rcn.net>
Source record: 46235
Cross-posted to: rec.audio.tubes,rec.radio.amateur.homebrew,rec.radio.swap

Anyone have have one of these? I have other transformers
UTC LS series among others or $$$ to trade!
Thanks!
Chuck...

1494. Re: Brainfart.....help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-20 17:59:14 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C73E3F2.1B9E7125@ieee.org>
Source record: 46236

Agreed....

I have a switch rated at 3A for AC and 400 ma for DC...

Clyde
KA1CRV

Mark Hall wrote:

> Careful!!!! Often times the DC current rating is less than the AC current
> rating. No way would DC current rating ever be equal to AC current
> rating. Check the switch specs..
>
> '73 KI4Z
>
> Shadowwalker wrote:
>
> > Got a question I should know the answer to but dont.....if a switch is
> > rated @ 3 amps with 120VAC.......what would the rating be @ 12VDC? I'm
> > thinking 30 amps (amperage times voltage = wattage, so 3amps X 120 VAC
> > = 360 watts...........360 watts divided by 12 volts = 30 Amps) is this
> > correct? Thanks for any help
> > Always keep your ass down, and your head even lower. 73's, Shadowwalker

1495. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-20 19:03:02 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0202201103.71e3a237@posting.google.com>
Source record: 46237
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3C735F09.7FE@pop.removethistomailme.net>...
> FYI to all: the current schematics are now posted at
> http://www.qsl.net/ke5fx/synth.html, along with my latest parallel-port
> control software and (Win32) source.
>
> These diagrams will be used to spin a prototype PC board that should be
> ready for testing in a few weeks. More to come!
>
> -- jm

Thanks Jim! The schematics look great.

I have a question.

Your phase noise appears much better than the Icom in the first two
plots, but it appears worse in the third plot. Here are the numbers:

Plot 1
Icom IC-R7000 first LO synthesizer: -60 dBc/Hz at 500 Hz
KE5FX hybrid synthesizer: -82 dBc/Hz at 500 Hz

Plot 2
Icom IC-R7000 first LO synthesizer: -78 dBc/Hz at 2 kHz
KE5FX hybrid synthesizer: -82 dBc/Hz at 2 kHz

Plot3
Icom IC-R7000 first LO synthesizer: -105 dBc/Hz at 10 kHz
KE5FX hybrid synthesizer: -98 dBc/Hz at 10 kHz

What happened in the third plot?

Best Regards,

Mike Monett
mrmonett@yahoo.com

1496. Re: PIC Sources?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-20 20:46:29 UTC
From: Rex <notreally@hotmail.invalid>
Message-ID: <c0187uk2441v8r8o49b75vmapkmd7oduen@4ax.com>
Source record: 46238

On Wed, 20 Feb 2002 14:26:41 GMT, n5kzw@arrl.net (Ed Bailen) wrote:

>I came across a PICSTART Plus programmer and an EPROM eraser in my
>stash of "Things I'd like to play with someday". I've downloaded the
>latest code for the programmer, and now I need to get a PIC17C44 to
>replace the one in the programmer.
>
>Can anyone recommend a favorite source for PICs (preferrably one that
>does not have a minimum order policy or a service charge for orders
>below $25)?
>

Digikey is one place. They are usually not the cheapest source but
give good service. If you get the -JW (windowed eeprom) version, you
can use it again in the future. Not cheap at $18.12. Here's a
link...
http://www.digikey.com/DigiHome.html

If you put 17c44/jw in the search box it will take you to the
listing.

The 16F628 is a good chip to use for learning. 16F877 is a big chip
for do everthing projects.

Jameco has developer kits and proto boards:

http://www.jameco.com/cgi-bin/ncommerce3/ExecMacro/Jameco/searchResult.d2w/report?sort=&search=microchip

https://www.jameco.com/cgi-bin/ncommerce3/ExecMacro/Jameco/home.d2w/report?cgrfnbr=874&ctgys=505;560;874;

-Rex, KK6MK
[rexa -TheAtSign- Next4dnaiLetters -period- (UsualComEnd)]< my_eemale_addy

1497. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-20 20:48:11 UTC
From: la8ak.xnd@online.no
Message-ID: <3c7409fa.769601@news.online.no>
Source record: 46239
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On 29 Jan 2002 17:21:19 -0800, mrmonett@yahoo.com (Mike Monett) wrote:

>"Paul M. Jaeger" <n7pj@ieee.org> wrote in message
news:<3F9FF53841E8375C.0D21516982B36950.F30247300DCFCED6@lp.airnews.net>...
>> Hi Mike,
>>
>> There was a note published in Electronic Design long ago, which
>> now appears as Appendix C in Bob Pease "Troubleshooting Analog
>> Circuits": Understanding and Reducing Noise Voltage on 3-Terminal
>> Regulators" by Errol H. Dietz. Has a plot of noise spectra with an
>> assortment of different bypass caps on an LM317.
>>
>> PJ
>
>Thanks Paul, that's the one. It was a long time ago and doesn't seem
>to appear in the web archives for Electronic Design or Bob Pease.
>
>I've been trying to keep my paper library to a minimum, but I guess
>there's some books you just can't do without :)
>
>Regards,
>
>Mike Monett
>mrmonett@yahoo.com

got a tip on how to reduce noise from regulators like 78L05 to
oscillator, you just add a saturated transistor with large reservoir
capacitor at base - in series with the voltage from regulator. Voltage
drop of 0.1-0.2V will improve noise sidebands a lot

Jan-Martin
LA8AK
--
remove ,xnd to reply

1498. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-20 21:15:51 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0202201315.4d8a6f49@posting.google.com>
Source record: 46240
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Miles <jmiles@pop.removethistomailme.net> wrote in message news:<3C735F09.7FE@pop.removethistomailme.net>...

Hi John,

I posted a query on the phase noise plots that hasn't appeared in Google yet but never mind.

I figured it out. The resolution bandwidth is 30Hz in the first two plots, and 1KHz in the third. This explains why the ICOM is worse in the first two plots.

In the third plot, both curves overlap until you reach the skirt in your synthesizer, then the ICOM drops faster. That's ok, it's beyond the audio range, so yours should give better performance.

Good work!

Best Regards,

Mike Monett
mrmonett@yahoo.com

1499. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-20 21:51:46 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C741A7E.302C@pop.removethistomailme.net>
Source record: 46241
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett wrote:
>
> I have a question.
>
> Your phase noise appears much better than the Icom in the first two
> plots, but it appears worse in the third plot. Here are the numbers:
>
> Plot 1
> Icom IC-R7000 first LO synthesizer: -60 dBc/Hz at 500 Hz
> KE5FX hybrid synthesizer: -82 dBc/Hz at 500 Hz
>
> Plot 2
> Icom IC-R7000 first LO synthesizer: -78 dBc/Hz at 2 kHz
> KE5FX hybrid synthesizer: -82 dBc/Hz at 2 kHz
>
> Plot3
> Icom IC-R7000 first LO synthesizer: -105 dBc/Hz at 10 kHz
> KE5FX hybrid synthesizer: -98 dBc/Hz at 10 kHz
>
> What happened in the third plot?

The R7000 uses dual VCOs, each covering significantly less range (260 MHz per VCO instead of 1 GHz per VCO in my design). In general, lower VCO tuning sensitivity means less noise outside the loop bandwidth.

The other point worth noting is that the R7000 uses a significantly lower loop bandwidth than I do. They actually have a 4.7 uF capacitor across the VCOs' varactors, driven by a JFET charge pump through a 1K (IIRC) resistor. You can see their reference spurs at 5 kHz if you look closely at the 10 kHz/div and 2 kHz/div plots. Overall, their PLL circuit doesn't appear to be as clean as mine, so I'm quieter inside my loop bandwidth (about 1500 Hz calculated) than they are inside theirs (less than 100 Hz?), at least as far as my analyzer can resolve.

Because their (relatively) narrowband, discrete-component-based VCOs are quieter than the plug-and-play Mini-Circuits parts I use, they perform better at offsets that are significantly outside both our respective loop bandwidths. At about 3 kHz, they start to pull ahead of me, and at 10 kHz and beyond, you are really seeing nothing but VCO noise in both cases.

Using a better-quality (and more expensive, and physically-larger, and harder-to-find) VCO would enable me to beat the R7000 across the board. The current level of performance is good enough for most applications,

though.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1500. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-20 22:02:44 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C741CC3.2C71@pop.removethistomailme.net>
Source record: 46242
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett wrote:
>
> John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3C735F09.7FE@pop.removethistomailme.net>...
>
> Hi John,
>
> I posted a query on the phase noise plots that hasn't appeared in
> Google yet but never mind.
>
> I figured it out. The resolution bandwidth is 30Hz in the first two
> plots, and 1KHz in the third. This explains why the ICOM is worse in
> the first two plots.
>

Well, the RBW is the same for the pink (Icom) and blue (mine) plots in each case. The 10 kHz plot had to be made with a wider RBW, or it would still not be finished. :)

In all cases, composite AM/PM (mostly PM) noise is determined by subtracting 10*log(RBW) from the plotted values. The real figures on a spectrum analyzer are typically a dB or two worse due to the analyzer's filter characteristics, but most users don't sweat that level of detail.

> In the third plot, both curves overlap until you reach the skirt in
> your synthesizer, then the ICOM drops faster. That's ok, it's beyond
> the audio range, so yours should give better performance.

Actually, close-in phase noise is less important for most communications applications than the far-out noise. The former can make your BER a little worse for digital signal recovery, but the latter can degrade adjacent-channel rejection in all narrowband modes.

I'd gladly give up some close-in noise performance in exchange for better performance at 10-15 kHz offsets, but (as my other reply notes) that's really not possible with a cheap, off-the-shelf octave-range VCO. I'm very glad to stand up to the Icom's 10-kHz performance as well as I do, considering how elaborate their synthesizer is by comparison.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1501. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-20 23:03:19 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <nv915a.jva.ln@my.linux.box>
Source record: 46243
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

In article <3C735F09.7FE@pop.removethistomailme.net>, John Miles wrote:

> FYI to all: the current schematics are now posted at
> http://www.qsl.net/ke5fx/synth.html, along with my latest parallel-port
> control software and (Win32) source.

Very nice! Thank you. One minor gripe, the link to the Digi-key filter
is broken.

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

1502. Re: Brainfart.....help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-20 23:10:36 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <cda15a.jva.ln@my.linux.box>
Source record: 46244

In article <TcEc8.30$HIN1.2752625@news2.randori.com>, Gary Glaenzer wrote:

>
> everyone knows them thar critters are called 'condensers' !
>

Only by you youngsters - us old timers call them
leyden jars.

http://www.alaska.net/~natnkell/leyden.htm

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

1503. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-20 23:39:41 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C74337C.3D85@pop.removethistomailme.net>
Source record: 46245
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Eamon Skelton wrote:
>
> Very nice! Thank you. One minor gripe, the link to the Digi-key filter
> is broken.
>

It's the ECS 10.7-15B (DigiKey part # X704-ND from
http://info.digikey.com/T021/V2/461.pdf).

Their search links use URL-embedded tokens that expire rapidly. I don't
guess a whole lot of brainpower went into that policy... gee, since we
make money by selling stuff, let's make it harder to refer people to
specific products on our site!

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1504. Help needed for the R.L. DRAKE VIRTUAL MUSEUM

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-21 00:15:25 UTC
From: JM CHERRY <jmc@dproducts.be>
Message-ID: <3c743c0f$0$33505$ba620e4c@news.skynet.be>
Source record: 46246

Dear Drake lovers,

I am looking, to complete the Museum Pages, for the following QST.
If you may scan it, please do it at 400 dpi, 258 grey level (8 bits) and
you may ZIP it after. Please no JPG compressed image. BMP 400 dpi can be OCR
by Adobe Acrobat Exchange. Thanks in advance.
Year
Mounth
Page
Description

1957
November QST p. 38 . Drake 1-A Sideband Receiver (Recent Equipment)
1960
July QST p. 43 . Drake 2-A Receiver (Recent Equipment)
1962
July QST p. 52 . Extended Coverage for the Drake 2-B Receiver (H&K)
1965
October QST p. 95 . Drake Noise Blanker, Using The (H&K)
November QST p. 64 . WWV On The Drake 2B (H&K)
December QST p. 80 . Drake TR-4 Transceiver (Recent Equipment)
1966
May QST p. 30 . Drake T-4X and T-4 (Recent Equipment)
June QST p. 20 . Offset Tuning and F.S.K. for the Drake TR-3 (Swanson)
December QST p. 42 . Drake 2-NT Transmitter, 2-C Receiver (Recent Equipment)
1967
October QST p. 42 . Drake MN-4 Matching Network (Recent Equipment)
1968
February QST p. 51 . Drake VHF Converters and Accessories (R. E.)
August QST p. 45 . Drake W-4 Wattmeter (Recent Equipment)
November QST p. 51 . Instability in the Drake 2B (H&K)
1969
April QST p. 53 . Drake MN-2000 Matching Network (R. E.)
August QST p. 49 . TR-4 Band Switch (H&K)
December QST p. 47 . Drake L-4B Linear Amplifier (R. E.)
1970
February QST p. 49 . Drake DC4 Power Supply (H&K)
July QST p. 54 . Drake TR-6 50-MHz Transceiver (R. E.)
December QST p. 60 . Drake SPR4 Receiver (Recent Equipment)
1971
March QST p. 48 . WWV on Drake Receivers (H&K)
September QST p. 50 . Drake ML-2 Marker Luxury FM Transceiver (R. E.)
1973
March QST p. 56 . Switch Lock for Drake TR4 (H&K)
1974

January QST p. 48 . Drake R-4C Communications Receiver (R. E.)
February QST p. 44 . Drake T-4XC Transmitter (Recent Equipment)
1976
December QST p. 40 . Drake RCS-4 Remote Coax Switch (Product Rev.)
"
p. 42 . Drake TR-4 Meter-Pointer Sticking (H&K)
1977
February QST p. 29 . TR-4C Outboard Receiver Modification [Sheller]
p. 44 . Drake R-4B VFO Problem
May QST p. 27 . Independent Sideband for Your Drake TR-4C [Gervenack]
August QST p. 32 . Independent Sideband for Your Drake TR-4C [Gervenack]
(Feedback)
September QST p. 45 . Drake R-4C, Additional RF Control
November QST p. 44 . Drake Transmitters, VOX Hint
December QST p. 44 . Drake TR-4C/R4C T-R Lever
1978
February QST p. 36 . Drake 4 Receive Drift
August QST p. 33 . Drake UV-3 FM System (Product Review)
1979
April QST p. 37 . Improved CW Reception With Drake R-4, R-4A and R-4B
Receivers
May QST p. 37 . Drake TR-7 HF Transceiver (Product Review)
"
p. 46 . Drake R-4C, Pulsed Crystal Calibrator
August QST p. 37 . Drake TR-7 HF Transceiver (Feedback)
September QST p. 45 . Drake 2-B, Increased Sensitivity
1980
January QST p. 49 . Drake R-7 Receiver (Product Review) (see Feedback, Feb
p. 17)
Febryary QST p. 17 . Drake R-7 Receiver (Feedback)
March QST p. 45 . Drake T-4XB, Anti-TVI Modification
1981
January QST p. 44 . 10 Meter Adaptation For Drake L7
March QST p. 52 . Positive Muting of the Drake TR-4C
May QST p. 34 . General Coverage Reception with the Drake R-4C Receiver
[Luetzow] (Feedback July, p. 47)
June QST p. 37 . Drake Transmitter Modification Just for Voice Operation
July QST p. 47 . General Coverage Reception with the Drake R-4C Receiver
(Feedback)
1982
September QST p. 43 . Drake L7 Amplifier Failure
1983
January QST p. 27 . R. L. Drake Model LF2 and LF6 Line Filters (Product
Review)
"
p. 46 . Drake T4X, Sticky VOX Relay
April QST p. 38 . Drake "Scotch" S Meters, Curing
May QST p. 34 . General Coverage Reception with the Drake R-4C Receiver
"
p. 40 . Drake T-4X Auxiliary Crystal Socket

Mail to jmc@dproducts.be

Thanks a lot !
Jean-Marie
JM CHERRY
http://www.dproducts.be/drake_museum

1505. WTB B&W 852 tank circut

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-21 02:11:32 UTC
From: "aa8wl@home.com" <aa8wl@home.com>
Message-ID: <3C74831B.26E38342@home.com>
Source record: 46147

Looking for a B&W 852 tank circuit for a project. TNX DE AA8WL Sam
aa8wlssb@aol.com

1506. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-21 02:53:32 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0202201853.6bbef95@posting.google.com>
Source record: 46148
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3C741CC3.2C71@pop.removethistomailme.net>...

[...]

> Actually, close-in phase noise is less important for most communications
> applications than the far-out noise. The former can make your BER a
> little worse for digital signal recovery, but the latter can degrade
> adjacent-channel rejection in all narrowband modes.
>
> I'd gladly give up some close-in noise performance in exchange for
> better performance at 10-15 kHz offsets, but (as my other reply notes)
> that's really not possible with a cheap, off-the-shelf octave-range
> VCO. I'm very glad to stand up to the Icom's 10-kHz performance as well
> as I do, considering how elaborate their synthesizer is by comparison.
>
> -- jm

I agree. I'm amazed at the level of performance you have achieved.

I notice the vco is not hermetically sealed. Have you given any
thought to bias stabilization to reduce the close-in noise? It should
be reasonably easy to pop the top and look inside.

Thank you for posting the schematics and the results. I'm sure this
gives a lot of encouragement to others, now that you have shown what
can be done with a handful of parts.

Bravo!

Best Regards,

Mike Monett
mrmonett@yahoo.com

1507. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-21 03:47:57 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C746DAC.7866@pop.removethistomailme.net>
Source record: 46149
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett wrote:
>
> I notice the vco is not hermetically sealed. Have you given any
> thought to bias stabilization to reduce the close-in noise? It should
> be reasonably easy to pop the top and look inside.
>
> Thank you for posting the schematics and the results. I'm sure this
> gives a lot of encouragement to others, now that you have shown what
> can be done with a handful of parts.
>

No prob! Once the boards are ready, it'll be trivial for anyone to build a digitally-tunable octave-band source for any range of frequencies between 100 MHz and 3 GHz. That'll definitely open up some interesting RF projects to people who previously lacked the inclination toward the detail work. Hobbyists can stop goofing around with those CATV tuner hacks and build themselves a REAL spectrum analyzer, for instance. :)

The next obstacle to making modular wide-range receiver construction possible is a sharp, easily-reproducible 1st-IF filter design. Tinkering with VCOs is somewhat farther down my list; I can't imagine that the Mini-Circuits OEMs haven't already picked all the low-hanging fruit.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1508. Re: Visual Basic and Sound Cards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-21 04:02:00 UTC
From: Richard Crowley <rcrowley7@xprt.net>
Message-ID: <u78saakobsa08b@corp.supernews.com>
Source record: 46150

When I plugged "visual basic" and "sound card" into my favorite search engine (www.alltheweb.com), I got 4,814 hits! Not sure if you are having a problem finding pages, or wading through TOO MANY pages? :-)

Wasn't there a thread in this newsgroup just recently about nearly the same topic? Some pretty good refrences in some of the responses.

RC

"JLB" <jim.bolinger@lintek.aeroflex.com> wrote in message news:8d5ec8a2.0202200530.754d97dc@posting.google.com...
> I posted this question to comp.lang.visual.basic, but haven't got an
> answer yet. There are enough people that read this group that I
> thought it would be worth a try...
>
> What I would like to do is capture input to the sound card and import
> it into Microsoft Excel, possibly with a Visual Basic macro.
>
> I have seen how to access the sound card, and how to write macros, but
> nothing on how to access the sound card from a macro. Or am I just
> not using the right words in the web browser?
>
> (My opinion of the web is that it is like a huge library where all the
> books are not sorted by title or subject, but by each of the
> individual words inside the books.)
>
> Jim
> N8EE

1509. LC VHF Bandpass Filter for 123Mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-21 05:26:41 UTC
From: paul@paulrowe.com
Message-ID: <bbd01c1e.0202202126.354199f0@posting.google.com>
Source record: 46151

Hi all;

I am designing a simple superhet to cover the aircraft band between 118 and 128 Mhz. I am going to use a NE602 and a MC1350P, but I would like a bandpass filter in the front end (prior to the NE602). Obviously, filter design is not a simple subject, but with the parts I have on hand, I need to design a filter with standard values. When I design such a filter, I always get non-standard values (low pf and very very low nH). I would like to design such a filter using small pf (10-450pF) and standard H (>=.5uH). I am finding that my books aren't helping: Arrl Handbook, RF Circuit Design (bowick), Solid State Radio Design, Secrets of RF design. They all yield strange values (mainly, inductors in the low nH range... which is not feasible).

Can anyone point me in the right direction ??? I know such a filter is possible (I have a schematic for one), and I want to be able to derive one rather than "copying."

sincerely, paul@paulrowe.com

chess anyone? http://www.paulrowe.com/game.cgi

1510. Re: LC VHF Bandpass Filter for 123Mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-21 05:56:47 UTC
From: Rick Karlquist <richard@karlquist.removethis.com>
Message-ID: <z_%c8.10207$S01.534836@sccrnsc02>
Source record: 46152

You need to use coupled resonator filters. An old reference
on this is Zverev: Handbook of Filter Synthesis. I know
some of the new books (perhap Rhea) also cover this topic.
If you use "top coupled" parallel tanks, you get very small
coupling capacitors. To avoid this problem, use the dual
topology consisting of series resonant tanks separated by
shunt capacitors. This technique works extremely well
at your frequency. I have built many filters this way and
the component values are very practical.

Rick N6RK

"Paul Rowe" <paul@paulrowe.com> wrote in message
news:bbd01c1e.0202202126.354199f0@posting.google.com...
> Hi all;
>
> I am designing a simple superhet to cover the aircraft band between
> 118 and 128 Mhz. I am going to use a NE602 and a MC1350P, but I would
> like a bandpass filter in the front end (prior to the NE602).
> Obviously, filter design is not a simple subject, but with the parts I
> have on hand, I need to design a filter with standard values. When I
> design such a filter, I always get non-standard values (low pf and
> very very low nH). I would like to design such a filter using small
> pf (10-450pF) and standard H (>=.5uH). I am finding that my books
> aren't helping: Arrl Handbook, RF Circuit Design (bowick), Solid State
> Radio Design, Secrets of RF design. They all yield strange values
> (mainly, inductors in the low nH range... which is not feasible).
>
> Can anyone point me in the right direction ??? I know such a filter
> is possible (I have a schematic for one), and I want to be able to
> derive one rather than "copying."
>
> sincerely, paul@paulrowe.com
>
> chess anyone? http://www.paulrowe.com/game.cgi

1511. Re: LC VHF Bandpass Filter for 123Mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-21 08:00:44 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <k0897ukqh8hre2oofkqht69gnm1aa1jmeg@4ax.com>
Source record: 46153

On 20 Feb 2002 21:26:41 -0800, paul@paulrowe.com (Paul Rowe) wrote:

>very very low nH). I would like to design such a filter using small
>pf (10-450pF)

450 pF is a huge capacitance for this kinds of frequencies, 10 pF is a big capacitance (Xc 130 ohms). You also have to include the stray capacitances, so the actual capacitor would have to be even less.

>and standard H (>=.5uH).

Why do you want to use a standard inductance, since a two to four turn slug tuned inductor should usually do the job, thus a small fixed capacitor could be used.

If a fixed inductor is used, a varactor diode could be used, since it has a lower stray capacitance than mechanical trimmer capacitors. It is important that the tuning range is well below the maximum capacitance of the varactor, thus, several volts of tuning voltage is needed, reducing the interference risk from strong out of band signals from driving the varactor into conduction.

>I am finding that my books
>aren't helping: Arrl Handbook, RF Circuit Design (bowick), Solid State
>Radio Design, Secrets of RF design. They all yield strange values
>(mainly, inductors in the low nH range... which is not feasible).

Looking at page 238 of the Solid State Design For Radio Amateurs and looking at the first 14 MHz filter with the fixed inductor L3 (my estimate it is about 1.9 uH) and 62 pF capacitance. Scale this to 123 MHz by multiplying both the C and L by 14/123 and you get 200 nH (4-6 turns) and 7 pF, which sounds quite reasonable.

Paul OH3LWR

1512. Re: PIC Sources?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-21 10:13:57 UTC
From: Mark Hall <vze2mhvc@bellatlantic.net>
Message-ID: <3C74C743.47918BA8@bellatlantic.net>
Source record: 46154

DIGI-KEY.com The best place to buy all kinds of electronics parts.

'73 KI4Z

Ed Bailen wrote:

> I came across a PICSTART Plus programmer and an EPROM eraser in my
> stash of "Things I'd like to play with someday". I've downloaded the
> latest code for the programmer, and now I need to get a PIC17C44 to
> replace the one in the programmer.
>
> Can anyone recommend a favorite source for PICs (preferrably one that
> does not have a minimum order policy or a service charge for orders
> below $25)?
>
> On the same lines, can anyone point me at a low-cost PIC prototyping
> board?
>
> TIA,
> Ed

1513. Re: LC VHF Bandpass Filter for 123Mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-21 10:32:52 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0202210232.1c24db62@posting.google.com>
Source record: 46155

Hi Paul,
did you consider a filter on microstrips or coaxial structures ? I
tried a comb microstrip structure with discrete tuning capacitors and
it looks very reasonable for the band you require. Go to
http://mujweb.cz/www/ok1sip/english/grebeh.htm , download the DOS
program from there and give it a try !

BR from Ivan

1514. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-21 11:01:44 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <o2k25a.8lb.ln@my.linux.box>
Source record: 46164
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

In article <3C74337C.3D85@pop.removethistomailme.net>, John Miles wrote:

> It's the ECS 10.7-15B (DigiKey part # X704-ND from
> http://info.digikey.com/T021/V2/461.pdf).
>
> Their search links use URL-embedded tokens that expire rapidly. I don't
> guess a whole lot of brainpower went into that policy... gee, since we
> make money by selling stuff, let's make it harder to refer people to
> specific products on our site!

I agree, some of these web-sites are too clever for their own good.

Many thanks to you and Richard for publishing this nice
project.

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

1515. Re: Visual Basic and Sound Cards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-21 12:57:04 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0202210457.276193af@posting.google.com>
Source record: 46156

Yes, since I have a finite life time I can't afford to wade through
the infinite nubmer of web pages! ;-)

Like I said, I have seen how to access the sound card, how to write
macros (in fact, I have a book on it), but not both at the same time!

Most of the pages that say how to access the sound card from VB talk
about playing wave files, or midi related stuff. All I want is the
raw data points to appear in a spread sheet.

Jim
N8EE

"Richard Crowley" <rcrowley7@xprt.net> wrote in message
news:<u78saakobsa08b@corp.supernews.com>...
> When I plugged "visual basic" and "sound card" into my favorite search
> engine (www.alltheweb.com), I got 4,814 hits! Not sure if you are having a
> problem finding pages, or wading through TOO MANY pages? :-)
>
> Wasn't there a thread in this newsgroup just recently about nearly the same
> topic? Some pretty good refrences in some of the responses.
>
> RC
>
>
> "JLB" <jim.bolinger@lintek.aeroflex.com> wrote in message
> news:8d5ec8a2.0202200530.754d97dc@posting.google.com...
> > I posted this question to comp.lang.visual.basic, but haven't got an
> > answer yet. There are enough people that read this group that I
> > thought it would be worth a try...
> >
> > What I would like to do is capture input to the sound card and import
> > it into Microsoft Excel, possibly with a Visual Basic macro.
> >
> > I have seen how to access the sound card, and how to write macros, but
> > nothing on how to access the sound card from a macro. Or am I just
> > not using the right words in the web browser?
> >
> > (My opinion of the web is that it is like a huge library where all the
> > books are not sorted by title or subject, but by each of the
> > individual words inside the books.)
> >
> > Jim
> > N8EE

1516. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-21 13:17:42 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c74f261$0$1350@echo-01.iinet.net.au>
Source record: 46157
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John
A query on the software and the setup of the PLL
I presume if the BW of the filter on the DDS is 15 KHz ie about 0.15% of 10.7 MHz then the PLL steps will be approximately 0.15% of the VCO minimum, ie about 1.78 MHz to give continuous coverage over the range 1-2 GHz. I presume the PLL reference will be divided by about 6 and the phase detector will work at 1.78 MHz with the main divider of the PLL working between 560 and 1120 (or thereabouts, depending on the exact reference frequency) for 1-2 GHz - is this correct? (I have not looked at your C code!)
There will be a bit of number crunching for the controller to do, especially for rapid steps.
For a given frequency step (say 1 Hz) the DDS will have differing delta values over the range of the PLL
Is there an algorithm that could be applied to an embedded controller where the brute force approach (as in a PC) might be difficult?

Richard

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message news:3C735F09.7FE@pop.removethistomailme.net...
> Mike Monett wrote:
> >
> > John Miles <jmiles@pop.removethistomailme.net> wrote in message news:<3C5DED79.17B@pop.removethistomailme.net>...
> > > Mike Monett wrote:
> > >
> > > > Yes, please post - we have been waiting to see them!
> > >
> >
> > FYI to all: the current schematics are now posted at
> > http://www.qsl.net/ke5fx/synth.html, along with my latest parallel-port
> > control software and (Win32) source.
> >
> > These diagrams will be used to spin a prototype PC board that should be
> > ready for testing in a few weeks. More to come!
> >
> > -- jm
> >
> > --
> > http://www.qsl.net/ke5fx
> > Note: My E-mail address has been altered to avoid spam
> > --

1517. Tayloe detector as narrowband tunable filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-21 14:59:40 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c750a48$0$1339@echo-01.iinet.net.au>
Source record: 46158

Dear all
I am working on mixers with Rod VK6KRG using the Tayloe detector which is a "commutating" mixer using multiplexers.
A proposed circuit has one input and 4 outputs from a Fairchild FST3253 1 to 4 analog multiplexer. The input signal is multiplexed to the 4 outputs by a 1:4 duty cycle clock which switches each in turn. Each ouput is filtered by a large capacitor. In the Tayloe system these 4 signals are fed to an audio phase shift network for SSB detection.
In this system the 4 outputs (which are at phase 0, 90, 180 and 270 degrees at 0 Hz) are fed to a second multiplexer set up in the opposite direction to the first. The clock for this is at the same frequency as the first and the original signal is restored. Of course, the clock for the second set of mixers could be on a another frequency - in this case the result is a frequency conversion with 0 Hz as an intermediate frequency. Both Rod and I have breadboarded this circuit and some interesting results emerge.
(1) Frequencies more than a few KHz from the clock carrier are quite significantly attenuated, with maximal attenuation being 20-30 dB. Presumably the input impedance of the Tayloe detector is maximal around the clock frequency and falls off rapidly on either side.
The filter at audio appears to determine the RF response
(2) This means that the detector exhibits good strong signal handling as off channel signals are attenuated
(3) The original signal to clock relationship is preserved - tuning the input siganl acrss the clock at the input produces the same at the output.
(4) Of course there are some problems - there is carrier feed through and an opposite sideband image.These could presumably be limited by mixer balance. In our prototypes noise was a problem which limited sensitivity
The circuit can be used as a narrowband tunable filter over a wide range.

Some questions:
(1) Has this been done before?
(2) Has anyone modelled or measured the input impedance of the Tayloe detector?
(3) What would be suitable circuits/solutions to overcome the problems of images, carrier feedthrough and noise?

Thanks

Richard

1518. Re: Visual Basic and Sound Cards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-21 15:11:15 UTC
From: Richard Crowley <rcrowley7@xprt.net>
Message-ID: <u7a3gn6ko0ua1e@corp.supernews.com>
Source record: 46159

"JLB" wrote
> Most of the pages that say how to access the sound card from VB talk
> about playing wave files, or midi related stuff. All I want is the
> raw data points to appear in a spread sheet.

"The following article shows you how to program your computer to fill an
array with samples from the soundcard..."
http://sdeyoreo.tripod.com/sdeyoreo/id5.html

I believe this was recommended by someone else on this newsgroup from the
previous thread.

1519. Siltronix Swan web page

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-21 17:54:49 UTC
From: Skipp <skipp@pilotNOSPAMPLEASE.ucdavis.edu>
Message-ID: <a53c99$7br$3@woodrow.ucdavis.edu>
Source record: 46160
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

Another shameless plug for the Swan Siltronix 1011 web page. Drop by to view a bit of history and some great information. Free Manual down load and some extra goodies you won't find in your local grocery store. :-)

http://sonic.ucdavis.edu/siltronix

The main Amateur Radio page on the sonic server can be found at:
http://sonic.ucdavis.edu

cheers
skipp

1520. Re: Visual Basic and Sound Cards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-21 18:19:31 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0202211019.29a1676d@posting.google.com>
Source record: 46161

Don't mean to get testy here, but my question was about using
Visual Basic from ***inside Excel***, not C++!!!

Since I said that I have seen how to use the sound card, and how to
write Excel macros, it follows that I **have** done a web search. And
I have seen the site in the link.

"Richard Crowley" <rcrowley7@xprt.net> wrote in message
news:<u7a3gn6ko0ua1e@corp.supernews.com>...
> "JLB" wrote
> > Most of the pages that say how to access the sound card from VB talk
> > about playing wave files, or midi related stuff. All I want is the
> > raw data points to appear in a spread sheet.
>
> "The following article shows you how to program your computer to fill an
> array with samples from the soundcard..."
> http://sdeyoreo.tripod.com/sdeyoreo/id5.html
>
> I believe this was recommended by someone else on this newsgroup from the
> previous thread.

1521. Correction (was Re: Hybrid PLL schematics)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-21 18:21:01 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C753B3F.1C73@pop.removethistomailme.net>
Source record: 46162
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Miles wrote:
>
> Their search links use URL-embedded tokens that expire rapidly. I don't
> guess a whole lot of brainpower went into that policy... gee, since we
> make money by selling stuff, let's make it harder to refer people to
> specific products on our site!
>

Turns out they do have a way to create persistent links at the cost of search speed. Using their 'Send this link via E-Mail' link towards the bottom of the page, you can generate a non-expiring link, in this case http://www.digikey.com/scripts/us/dksus.dll?PName?Name=X704-ND.
Apologies to Digi-Key for calling the intelligence behind their search engine into question. :)

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1522. Re: Tayloe detector as narrowband tunable filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-21 18:23:51 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0202211023.26bb9713@posting.google.com>
Source record: 46163

Sounds to me like you just invented the Switched Capacitor Analog
Filter.

Maxim, among others, sells the things in 8 pin dip packages. Look in
the Digikey catalog.

Do a web search on Switched Capacitor Analog Filter. You're sure to
find a bunch of info on it.

Jim
N8EE

"Richard Hosking" <zaprichardh@iinet.net.au(remove the zap)> wrote in message
news:<3c750a48$0$1339@echo-01.iinet.net.au>...
> Dear all
> I am working on mixers with Rod VK6KRG using the Tayloe detector which is a
> "commutating" mixer using multiplexers.
> A proposed circuit has one input and 4 outputs from a Fairchild FST3253 1 to
> 4 analog multiplexer. The input signal is multiplexed to the 4 outputs by a
> 1:4 duty cycle clock which switches each in turn. Each ouput is filtered by
> a large capacitor. In the Tayloe system these 4 signals are fed to an audio
> phase shift network for SSB detection.
> In this system the 4 outputs (which are at phase 0, 90, 180 and 270 degrees
> at 0 Hz) are fed to a second multiplexer set up in the opposite direction to
> the first. The clock for this is at the same frequency as the first and the
> original signal is restored. Of course, the clock for the second set of
> mixers could be on a another frequency - in this case the result is a
> frequency conversion with 0 Hz as an intermediate frequency. Both Rod and I
> have breadboarded this circuit and some interesting results emerge.
> (1) Frequencies more than a few KHz from the clock carrier are quite
> significantly attenuated, with maximal attenuation being 20-30 dB.
> Presumably the input impedance of the Tayloe detector is maximal around the
> clock frequency and falls off rapidly on either side.
> The filter at audio appears to determine the RF response
> (2) This means that the detector exhibits good strong signal handling as off
> channel signals are attenuated
> (3) The original signal to clock relationship is preserved - tuning the
> input siganl acrss the clock at the input produces the same at the output.
> (4) Of course there are some problems - there is carrier feed through and an
> opposite sideband image.These could presumably be limited by mixer balance.
> In our prototypes noise was a problem which limited sensitivity
> The circuit can be used as a narrowband tunable filter over a wide range.
>
> Some questions:
> (1) Has this been done before?

> (2) Has anyone modelled or measured the input impedance of the Tayloe
> detector?
> (3) What would be suitable circuits/solutions to overcome the problems of
> images, carrier feedthrough and noise?
>
> Thanks
>
> Richard

1523. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-21 20:14:33 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C755625.678B@pop.removethistomailme.net>
Source record: 46165
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Richard Hosking wrote:
>
> John
> A query on the software and the setup of the PLL
> I presume if the BW of the filter on the DDS is 15 KHz ie about 0.15% of
> 10.7 MHz then the PLL steps will be approximately 0.15% of the VCO minimum,
> ie about 1.78 MHz to give continuous coverage over the range 1-2 GHz. I
> presume the PLL reference will be divided by about 6 and the phase detector
> will work at 1.78 MHz with the main divider of the PLL working between 560
> and 1120 (or thereabouts, depending on the exact reference frequency) for
> 1-2 GHz - is this correct? (I have not looked at your C code!)
> There will be a bit of number crunching for the controller to do, especially
> for rapid steps.
> For a given frequency step (say 1 Hz) the DDS will have differing delta
> values over the range of the PLL
> Is there an algorithm that could be applied to an embedded controller where
> the brute force approach (as in a PC) might be difficult?
>

Well, my parallel-port code allows a lot more flexibility than necessary
in choosing R and P modulus values. In practice these two constants
will be fixed, eliminating a lot of the math that the PC code is doing.

With the LMX2326 (unlike the ADF4112), P is fixed at 32, so the minimum
supported N modulus is 992 (=P^2-P for any dual-modulus prescaler). In
general you want to minimize N for less reference-noise multiplication,
although at higher comparison frequencies the phase detector chip's own
noise starts to dominate.

At the time I was experimenting with the LMX2326, I was using an 11.5
MHz crystal filter on the reference, so the R value choice that
minimized N was 12 (Fc=958 kHz, N=1043 at 1 GHz). This is the R value
that yielded all of my best plots. By the same reasoning, the R value
for the 10.7 MHz filter we're using will be 11.

If you treat R as a constant, then the target comparison frequency can
be precalculated as a constant as well. Almost all of the math in my
SYNTH_calc_DDS_frequency() function can be calculated offline with
knowledge of DDS_CENTER_FREQ (=10.7 MHz), R (=11), and FOUT_MIN (=1
GHz):

```
center_comparison_freq = DDS_CENTER_FREQ / R =972727
min_N = FOUT_MIN / center_comparison_freq =1028
DDS_bw = center_comparison_freq / min_N * R =10408
```

DDS_min_freq = DDS_CENTER_FREQ - (DDS_bw / 2) =10694796
Fcomp = DDS_min_freq / R =972254

The first three expressions determine the required DDS tuning range in hertz. This range needs to remain safely above the comparator's detection threshold as it passes through the crystal filter.

DDS_min_freq is simply the lower end of the DDS tuning range, based on the DDS bandwidth previously calculated.

Fcomp is the comparison frequency that, for any output frequency that's an exact multiple of N, corresponds to the lower end of the DDS tuning range.

At runtime, Fcomp is the only result we need. This is the "target" PLL comparison frequency that will be used to determine both N (for the PLL) and DDS_freq (for the DDS):

N = output_freq / Fcomp
DDS_freq = output_freq * R / N

That's it... those two are only two equations that the microcontroller needs to solve when changing frequencies. output_freq must be a 32-bit unsigned integer for 1 Hz resolution from DC to 4 GHz, and DDS_freq can be a 24.8 fixed-point value that will fit in 32 bits with a larger (32.8) temporary store for the (output_freq * R) / N calculation. Any microcontroller should be able to do this with no trouble at all.

The N calculation above is assumed to round by truncation, C-style. We must round N down to the next-lower integer because Fcomp was calculated based on the lower end of the DDS tuning range. If your math routines round differently, you'll have to walk back through the equations to make sure the DDS tuning range is still centered in the crystal filter's passband.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1524. FS: EPROM eraser, and PIC chips

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-21 20:20:39 UTC
From: Mike Hall <mghall@enteract.com>
Message-ID: <3C755697.B36A8F35@enteract.com>
Source record: 46166
Cross-posted to: chi.forsale,sci.electronics.equipment,rec.radio.amateur.homebrew

```
DataErase II ACT EPROM eraser:

four position, with timer, with wall adapter
asking $20

Miscellaneous MicroChip PIC parts and boards:

ProtoPIC boards (4)
for 18pin PIC
prototype array 14 x 15 holes
pins for regulator, caps, crystal or resonator
traces for SOIC EEPROM and motor controller
two boards have socket, regulator, caps, and 4MHz
crystal
two boards are blank

Various PIC chips
2 16C54/JW-S1 windowed EPROM
1 16C55/JW-S1 windowed EPROM
1 16C71/JW-S1 windowed EPROM
2 16C54/RC-P OTP
2 16C55/RC-SP OTP

asking $20 for all the PIC parts and boards

Located west of Chicago; prefer local buyers; shipping extra.
And, yes, I'll regret it when they're all gone! :-/

Thanks!

--
Mike Hall
http://www.enteract.com/~mghall
(the 'GEAR' entry lists these items)
AB9CO EN51VT
```

1525. Re: Visual Basic and Sound Cards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-21 21:19:30 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0202211319.3cc82d64@posting.google.com>
Source record: 46167

jim.bolinger@lintek.aeroflex.com (JLB) wrote in message
news:<8d5ec8a2.0202211019.29a1676d@posting.google.com>...

> Don't mean to get testy here, but my question was about using

> ***Visual Basic*** from ***inside Excel***, not C++!!!

>

> Since I said that I have seen how to use the sound card, and how to

> write Excel macros, it follows that I **have** done a web search. And

> I have seen the site in the link.

Then read the samples in to a file, slurp them in to
Excel, and generally get on with it.

Laura Halliday VE7LDH "Que les nuages soient notre
Grid: CN89lg pied a terre..."
ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

1526. Re: Question on News Group protocol

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-21 23:34:32 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C758408.7226DBD3@clifto.com>
Source record: 46168

JLB wrote:
> Dumb question #434779: What percentage of internet traffic is made up
> of replies to replies to replies... without snipping out all the
> redundant stuff?

Probably more than 99% of that kind of traffic is by top-posters.

Probably more than 95% of traffic that consists of dozens of lines of
untrimmed, quoted text and ONE LINE (or even one *word*) in reply, is
by top-posters.

--
Britney Spears' Guide to Semiconductor Physics
<http://britneyspears.ac/lasers.htm>

1527. Re: PIC Sources?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-22 00:26:28 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u7b423grv7p735@corp.supernews.com>
Source record: 46169

While I'm a big fan of DigiKey, and I get all my PICs there, they don't satisfy one of Ed's requirements - no service charge for orders under $25.

Jameco does have PICs and I believe they don't have a minimum order. I think you can get a good deal on shipping through them, too, but I don't know that for sure. I rarely order from Jameco preferring DigiKey's outstanding service.

..

To tell the truth, I don't know where you can get a PIC
"Mark Hall" <vze2mhvc@bellatlantic.net> wrote in message
news:3C74C743.47918BA8@bellatlantic.net...
> DIGI-KEY.com The best place to buy all kinds of electronics parts.
>
> '73 KI4Z
>
> Ed Bailen wrote:
>
> > I came across a PICSTART Plus programmer and an EPROM eraser in my
> > stash of "Things I'd like to play with someday". I've downloaded the
> > latest code for the programmer, and now I need to get a PIC17C44 to
> > replace the one in the programmer.
> >
> > Can anyone recommend a favorite source for PICs (preferrably one that
> > does not have a minimum order policy or a service charge for orders
> > below $25)?
> >
> > On the same lines, can anyone point me at a low-cost PIC prototyping
> > board?
> >
> > TIA,
> > Ed
>

1528. Re: PIC Sources?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-22 00:53:08 UTC
From: Mark Hall <vze2mhvc@bellatlantic.net>
Message-ID: <3C759553.E534CFB8@bellatlantic.net>
Source record: 46170

Not to mention their awesome stock..

xpyttl wrote:

> While I'm a big fan of DigiKey, and I get all my PICs there, they don't
> satisfy one of Ed's requirements - no service charge for orders under $25.
>
> Jameco does have PICs and I believe they don't have a minimum order. I
> think you can get a good deal on shipping through them, too, but I don't
> know that for sure. I rarely order from Jameco preferring DigiKey's
> outstanding service.
>
> ..
>
> To tell the truth, I don't know where you can get a PIC
> "Mark Hall" <vze2mhvc@bellatlantic.net> wrote in message
> news:3C74C743.47918BA8@bellatlantic.net...
> > DIGI-KEY.com The best place to buy all kinds of electronics parts.
> >
> > '73 KI4Z
> >
> > Ed Bailen wrote:
> >
> > > I came across a PICSTART Plus programmer and an EPROM eraser in my
> > > stash of "Things I'd like to play with someday". I've downloaded the
> > > latest code for the programmer, and now I need to get a PIC17C44 to
> > > replace the one in the programmer.
> > >
> > > Can anyone recommend a favorite source for PICs (preferrably one that
> > > does not have a minimum order policy or a service charge for orders
> > > below $25)?
> > >
> > > On the same lines, can anyone point me at a low-cost PIC prototyping
> > > board?
> > >
> > > TIA,
> > > Ed
> >

1529. Re: IC756PRO to Yaesu Quadra Amp band data interface?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-22 01:05:57 UTC
From: Brian Short <k7on@earthlink.net>
Message-ID: <MPG.16dfa6eda5e6a6769896c8@news.earthlink.net>
Source record: 46171

Likely what you say is true, I don't know.

What I had given some thought to is:

Use a microcontroller analog-to-digital input to
sample the Icom band data voltage.

Using the microcontroller, set the status of 4
digital discrete outputs to the Yaesu type band
data.

This could be done with a PIC, or simpler something
like the NetMedia BX-24 (an enhanced BS2 type thing
with A/D inputs etc).

For me, the microcontroller route would be simpler.

> It appears that a LM3914 in dot mode and a set of diodes in a matrix
> is most of what is needed for a true band-data interface. Has anyone
> tried to set this up?
>
> Jerry W4UK
>

1530. Milton, Vermont Hamfest, Feb. 23

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-22 01:19:55 UTC
From: John Grow <jgrow@sympatico.ca>
Message-ID: <r0hd8.22217$Lc2.2619744@news20.bellglobal.com>
Source record: 46172

Please see http://www.ranv.org/milton.html for more details

1531. Re: Tayloe detector as narrowband tunable filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-22 02:43:39 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <a54bd1$m3l$1@slb7.atl.mindspring.net>
Source record: 46173

Hmmm... Input impedance of the Tayloe detector...

Well, in the typical application, it is working against the antenna input impedance of 50 ohms as part of the effective R/C lowpass effect. The actual impedance of the switching device is something like 2 or 3 ohms so the antenna reactance is a major part of the lowpassing.

Which means that the lowpass frequency rolloff which occurs in the capacitors to ground after the switching device will vary depending on the antenna impedance. It can be a major change. For example, if one goes from a resonant antenna to a random length wire.

If using an RF preamp then depending on the design of the preamp, it may provide a fixed impedance into the detector but even so the lowpass is a function of the impedance of the RF amplifier and not the switching device.

Some of the articles I've read mention 200 ohms, but that is the result of the 50 ohm resonant antenna being connected to a given capacitor 1/4 of the time, hence 200 ohms effective impedance.

So if you have an off-resonance antenna, say for a multiband Rx of some sort, the antenna may be, let's say 200 ohms, then that is multipled by that 1/4 multiplexing on interval and the tayloe detector is now forming a lowpass with effectively 800 ohms resistance working against the shunt capacitor to ground.

For that sort of general use, you have to make the capacitor small enough so that the lowpass rolloff won't bother the desired audio band even under the worst case antenna you are willing to allow.

Which means that when you happen to tune the detector to some frequency where the antenna is resonant, the lowpass won't roll off very much.....

This means the detector works best in a narrow band, resonant antenna application, where you can set the integrating capacitors to cause lowpass rolloff just above the desired audio bandwidth.

Jim Pennell
N6BIU

1532. Re: Tayloe detector as narrowband tunable filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-22 03:16:10 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0202211916.7b54f474@posting.google.com>
Source record: 46174

jim.bolinger@lintek.aeroflex.com (JLB) wrote in message
news:<8d5ec8a2.0202211023.26bb9713@posting.google.com>...
> Sounds to me like you just invented the Switched Capacitor Analog
> Filter.
>
> Maxim, among others, sells the things in 8 pin dip packages. Look in
> the Digikey catalog.
>
> Do a web search on Switched Capacitor Analog Filter. You're sure to
> find a bunch of info on it.
>
> Jim
> N8EE
>
One of the things that struck me when people first mentioned the "Tayloe
Mixer" here (and I found a schematic) was a certain resemblance to
the sort of circuitry used in Coherent CW. I probably noticed it
because looking at CCW schematics, there was something nagging me
at the back of my mind. There was something there that I thought could
be extended....

I've always been curious about how Dan Tayloe came to the circuit.
What prompted him to give it a try? I've not seen anything about
this (though perhaps I missed it). Because seeing commutating filters
(the first issue of QST that I ever saw, April 1971, had such a filter)
and seeing those CCW schematics made me think, though I never tried
anything and there was only supposition (and vague enough that I can
no longer remember exactly what).

In CCW, you have two data paths. In each, there is a mixer (or was
it a sample and hold?) being clocked at the input frequency, but
the clock to each channel is in quadrature. So you get a DC signal.
You then have two more mixers (or again was it a sample and hold?),
clocked at audio frequencies. Again, the clocking is in quadrature.

It's been a while since I've looked at descriptions (and sadly, none
of my books have CCW in more than passing), but the first conversion sure
looked like what you'd see in a phasing receiver. The second conversion,
back to audio, seemed to do the job of the audio phase network, The
result was singal signal, but a narrow bandwidth.

The best article in the ham magazines about commutating filters was in Ham
Radio magazine, circa 1978, I think by Hank Olson. Unless I'm garbling
it, the cover features Wes Stewart's split-band voice processor. I
had always meant to dig up some of these articles and post a bibliography,

because of the similarity between commutating filters, and CCW, and the Tayloe Mixer.

Michael VE2BVW

1533. Re: Tayloe detector as narrowband tunable filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-22 03:41:29 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c75bcd2$0$3860@echo-01.iinet.net.au>
Source record: 46175

I think you misunderstood the setup which is difficult to explain in text.
The filter effect works at RF
For example, on a breadboard test with a clock of 3.5 MHz, the ouput peaked with an input frequency of 3.5 MHz (ie at the clock frequency) and with some setups (eg having an input resistor to increase the R in the RC network) a very sharp peak could be obtained (6 dB down at inputs of 3.5 MHz +/- 20 KHz or so)
Moreover the filter can be tuned to any frequency simply by tuning the first mixer clock. Further filtering can be performed by making the second multiplexer clock at some IF (say 455 KHz) and the signal is then upconverted from zero to 455 KHz without image problems. (apart from "inband" images due to quadrature/SSB inbalance)

Richard

"JLB" <jim.bolinger@lintek.aeroflex.com> wrote in message news:8d5ec8a2.0202211023.26bb9713@posting.google.com...
> Sounds to me like you just invented the Switched Capacitor Analog
> Filter.
>
> Maxim, among others, sells the things in 8 pin dip packages. Look in
> the Digikey catalog.
>
> Do a web search on Switched Capacitor Analog Filter. You're sure to
> find a bunch of info on it.
>
> Jim
> N8EE
>
> "Richard Hosking" <zaprichardh@iinet.net.au(remove the zap)> wrote in message news:<3c750a48$0$1339@echo-01.iinet.net.au>...
> > Dear all
> > I am working on mixers with Rod VK6KRG using the Tayloe detector which is a
> > "commutating" mixer using multiplexers.
> > A proposed circuit has one input and 4 outputs from a Fairchild FST3253 1 to
> > 4 analog multiplexer. The input signal is multiplexed to the 4 outputs by a
> > 1:4 duty cycle clock which switches each in turn. Each ouput is filtered by
> > a large capacitor. In the Tayloe system these 4 signals are fed to an audio
> > phase shift network for SSB detection.
> > In this system the 4 outputs (which are at phase 0, 90, 180 and 270

degrees
> > at 0 Hz) are fed to a second multiplexer set up in the opposite
direction to
> > the first. The clock for this is at the same frequency as the first and
the
> > original signal is restored. Of course, the clock for the second set of
> > mixers could be on a another frequency - in this case the result is a
> > frequency conversion with 0 Hz as an intermediate frequency. Both Rod
and I
> > have breadboarded this circuit and some interesting results emerge.
> > (1) Frequencies more than a few KHz from the clock carrier are quite
> > significantly attenuated, with maximal attenuation being 20-30 dB.
> > Presumably the input impedance of the Tayloe detector is maximal around
the
> > clock frequency and falls off rapidly on either side.
> > The filter at audio appears to determine the RF response
> > (2) This means that the detector exhibits good strong signal handling as
off
> > channel signals are attenuated
> > (3) The original signal to clock relationship is preserved - tuning the
> > input siganl acrss the clock at the input produces the same at the
output.
> > (4) Of course there are some problems - there is carrier feed through
and an
> > opposite sideband image.These could presumably be limited by mixer
balance.
> > In our prototypes noise was a problem which limited sensitivity
> > The circuit can be used as a narrowband tunable filter over a wide
range.
> >
> > Some questions:
> > (1) Has this been done before?
> > (2) Has anyone modelled or measured the input impedance of the Tayloe
> > detector?
> > (3) What would be suitable circuits/solutions to overcome the problems
of
> > images, carrier feedthrough and noise?
> >
> > Thanks
> >
> > Richard

1534. Re: Tayloe detector as narrowband tunable filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-22 03:44:41 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C75BEA9.6AB5BECD@clifto.com>
Source record: 46177

Michael Black wrote:
> I've always been curious about how Dan Tayloe came to the circuit.

To save Dan the trouble of retyping it:

Message-ID: <3B2C28F6.8579A7CE@home.com>
From: Dan Tayloe <dtayloe@home.com>
Newsgroups: rec.radio.amateur.homebrew
Subject: Re: Tayloe Mixer
Date: Sun, 17 Jun 2001 03:50:15 GMT

"Clifton T. Sharp Jr." wrote:
>
> Dan Tayloe wrote:
> > I saw Phil Rice's article for the first time about a year ago. It is
> > not the same, but it is similar. However, as you have pointed out, his
> > circuit was not useful for either weak signal nor high dynamic range
> > receiver work, where as mine has been optimized for both.
>
> The question I've most wanted to ask you since I first saw this nifty
> circuit: what got you started in this direction? What were you looking
> for or experimenting with that eventually led you to do this design?

Actually what got me started in this direction was the availability of
the TI 74CBT3253 high speed analog mux and a 3000 mile (Phoenix to New
York) cross country drive. I had lots of time to do nothing but think
and ponder. The 74CBT3253 is a zero delay analog mux (as opposed to a
high delay digital gate) used to connect microprocessor address and data
lines to different banks of memory. It was never intended for analog
use, but it works quite well for that task.

I knew about audio switched capacitor filters using an input resistor
and four capacitors which were switched at a 4x rate. The input side to
the mux ends up exhibiting sharp bandpass behavior, based upon the R/C
time constant of the single R and multiple Cs used.

The idea of an active RF bandpass filter on a receiver front end is what
got me started. Since we now had a *really* fast dual 4:1 mux part,
perhaps I could do some active RF bandpass filtering using the switched
capacitor filter in front of a receiver mixer rather than a simple fixed
tune bandpass L/C.

The really neat thing about this is that if I combined the VFO and IF
BFO signals together at a 4x rate, this narrow active RF bandpass filter
would track the receiver tuning. This should enhance receiver
performance on congested bands such as 20m (contests) or on 40m with big

adjacent SWBC signals.

I pondered this and the fact that if I was using a really narrow rf active filter, the signal I really wanted was at an offset of 600 to 800 Hz, and if I tried to do 4x at that offset frequency, I would likely be injecting a really strong signal on top of what I wanted to listen to. I pondered this aspect quite a bit.

In order to produce the necessary 4x clocking for the rf switched capacitor filter, it would be necessary to combine the BFO and VFO together and then produce a composite 4x signal (maybe using a PLL or a bunch of exactly synchronized DDSs... a bit complex but manageable) to drive the filter.

In order to simply test the idea, I decided upon a scheme to use a direct conversion receiver as the test bed. Then it would be simple since the 4x signal used for the RF switched capacitor filter could be divided by four and used for the direct conversion mixer VFO.

Much simpler! A direct conversion receiver would not be optimum, but it would allow me to test the idea before trying the more complex 4x clocking trick on a superhet receiver.

It was then that I started thinking (I was still driving) about what the signals looked like on the switched capacitor filter at zero beat to an incoming RF signal, which would be four equidistant points on a sinewave, stationary. Then I thought about what they looked like when not exactly on frequency: each of the four outputs would drift slowly tracing a sinewave at the difference frequency, each formed of RF samples taken 1/4 cycle apart, each output then being 90 degrees apart from each other.

I suddenly realized that the switched capacitor topology could be used as a detector (no separate direct conversion mixer required), that it naturally produced all four phases of output, had bandpass characteristics, and that the input RF signal was being "integrated" on to each of the four capacitors through the input filter R, so that only difference frequency appeared and not the sum. Lastly, I realized that the new detector seemed to capture the peak RF voltage, and thus have a low detection loss (under 0.9 db conversion loss).

Since I have read about the R2 phasing receiver, I began to work on receiver designs based upon that approach (two branch I and Q audio combined using 90 degree phasing shifting to given single sided reception). I have been working on incrementally making improvements to the basic design for several years now. I am on my 4th generation design, and there are still ideas to try out and improvements to made. I am trying out new modifications this weekend.

I never returned to pursue the RF active front end receiver filtering aspect. There is only so much time in the world to experiment! It might not work the first time, but problems are simply engineering opportunities.

- Dan Tayloe, N7VE; Phoenix, Az; Az ScQRPions

--
Britney Spears' Guide to Semiconductor Physics
<http://britneyspears.ac/lasers.htm>

1535. Re: Tayloe detector as narrowband tunable filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-22 03:47:07 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c75be23$0$3855@echo-01.iinet.net.au>
Source record: 46176

It is true that the performance will vary according the source impedance of
the circuit
We have used a preamp with a predictable input impedance - eg a grounded
gate FET circuit whose input impedance is proprtional to Gm*drain current.
I am not sure what this looks like as a source to the mixer however.
Presumably the best circuit would be a low impedance source for the mixer
with the filter R in the RC set by an input resistor to the mixer.

Richard

"Jim Pennell" <NoSpam@killspam.com> wrote in message
news:a54bd1$m3l$1@slb7.atl.mindspring.net...
> Hmmm... Input impedance of the Tayloe detector...
>
> Well, in the typical application, it is working against the antenna
input
> impedance of 50 ohms as part of the effective R/C lowpass effect. The
> actual impedance of the switching device is something like 2 or 3 ohms so
> the antenna reactance is a major part of the lowpassing.
>
> Which means that the lowpass frequency rolloff which occurs in the
> capacitors to ground after the switching device will vary depending on the
> antenna impedance. It can be a major change. For example, if one goes
> from a resonant antenna to a random length wire.
>
> If using an RF preamp then depending on the design of the preamp, it
may
> provide a fixed impedance into the detector but even so the lowpass is a
> function of the impedance of the RF amplifier and not the switching
device.
>
> Some of the articles I've read mention 200 ohms, but that is the result
> of the 50 ohm resonant antenna being connected to a given capacitor 1/4 of
> the time, hence 200 ohms effective impedance.
>
> So if you have an off-resonance antenna, say for a multiband Rx of some
> sort, the antenna may be, let's say 200 ohms, then that is multipled by
that
> 1/4 multiplexing on interval and the tayloe detector is now forming a
> lowpass with effectively 800 ohms resistance working against the shunt
> capacitor to ground.
>
> For that sort of general use, you have to make the capacitor small
enough
> so that the lowpass rolloff won't bother the desired audio band even under

> the worst case antenna you are willing to allow.
>
> Which means that when you happen to tune the detector to some frequency
> where the antenna is resonant, the lowpass won't roll off very much.....
>
> This means the detector works best in a narrow band, resonant antenna
> application, where you can set the integrating capacitors to cause lowpass
> rolloff just above the desired audio bandwidth.
>
>
> Jim Pennell
> N6BIU
>
>
>

1536. Re: Tayloe detector as narrowband tunable filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-22 04:06:39 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c75c2b7$0$3858@echo-01.iinet.net.au>
Source record: 46178

"Michael Black" <blackm00@cam.org> wrote in message
news:6447bcd3.0202211916.7b54f474@posting.google.com...
> jim.bolinger@lintek.aeroflex.com (JLB) wrote in message
news:<8d5ec8a2.0202211023.26bb9713@posting.google.com>...
> >
> One of the things that struck me when people first mentioned the "Tayloe
> Mixer" here (and I found a schematic) was a certain resemblance to
> the sort of circuitry used in Coherent CW. I probably noticed it
> because looking at CCW schematics, there was something nagging me
> at the back of my mind. There was something there that I thought could
> be extended....
>
> I've always been curious about how Dan Tayloe came to the circuit.
> What prompted him to give it a try? I've not seen anything about
> this (though perhaps I missed it). Because seeing commutating filters
> (the first issue of QST that I ever saw, April 1971, had such a filter)
> and seeing those CCW schematics made me think, though I never tried
> anything and there was only supposition (and vague enough that I can
> no longer remember exactly what).
>
> In CCW, you have two data paths. In each, there is a mixer (or was
> it a sample and hold?) being clocked at the input frequency, but
> the clock to each channel is in quadrature.

At this point the circuits are similar

So you get a DC signal.
> You then have two more mixers (or again was it a sample and hold?),
> clocked at audio frequencies. Again, the clocking is in quadrature.

This is equivalent to the second multiplexer except that in our circuit the
second clock converts from DC back up the signal frequency or to some IF. In
the CCW case the IF is at audio (but not 0Hz). Presumably this has the
effect of shifting the CW carrier by an amount equivalent to the second
clock

>
> It's been a while since I've looked at descriptions (and sadly, none
> of my books have CCW in more than passing), but the first conversion sure
> looked like what you'd see in a phasing receiver. The second conversion,
> back to audio, seemed to do the job of the audio phase network, The
> result was singal signal, but a narrow bandwidth.
>
> The best article in the ham magazines about commutating filters was in Ham
> Radio magazine, circa 1978, I think by Hank Olson.

So it has all been done before...

Unless I'm garbling
> it, the cover features Wes Stewart's split-band voice processor. I
> had always meant to dig up some of these articles and post a bibliography,
> because of the similarity between commutating filters, and CCW, and the
> Tayloe Mixer.
>

Michael VE2BV

Richard VK6BRO

1537. motorola Purc 5000 Transmitter VHF and UHF???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-22 05:04:21 UTC
From: Noel <notthisone@nothere.com>
Message-ID: <pjkd8.66191$dG.27205514@news1.rdc1.sdca.home.com>
Source record: 46179

I have the chance to get a vhf and uhf purc 5000 motorola transmitters for my use and I like to put them on the hamband. Have any links for these ? I need the chart on the prom chip for the control board to program the tx freq.

Noel Hampton
kb5csn@cox.net

1538. Re: David Hendon to leave RA

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-22 05:07:03 UTC
From: "Jim Hill, w6ivw" <Xslimjimzz@home.com>
Message-ID: <74kb7us0alku5aqin14slhd67ojqupi1ug@4ax.com>
Source record: 46180

On Tue, 19 Feb 2002 01:42:26 GMT, r9c9nixon@mi9nd9spring.com (Russell C. Nixon) wrote:

>That's funny, on Monday, 02/18/2002 at 20:40 EST I get to a webpage
>owned by Al Waller and contains information of use to hams.
>
>babel@fish.org wrote:
>
>>On Mon, 18 Feb 2002 14:02:49 -0000, "ham" <nospam@nospam.com> wrote:
>>
>>>check out STOP PRESS at www.qsl.net/g0crw
>>> for more details
>>>
>>This makes 2 or 3 posts referenceing 'qsl.net'. I've gone over there
>>and found _only_ a portal containing gambling links and some possibly
>>"adult" links. My guess is it's either a cross-post intended for
>>some 'amateur' porn group or someone is trying to shill hits on that
>>page.
>>it's a loser!
>>
>
>Russ
>"Two-fifteen, no ambulance needed!"
>Subtract all nines to reply

I checked too. http://www.qsl.net/ brings up a valid ham radio oriented page. http://www.qsl.net/g0crw/ brings up the CROWBOROUGH AMATEUR RADIO page with a statement in the left column saying Forbidden

You don't have
permission to access
/cgi-bin/freestats-bin/do/get_code.cgi
on this server.

Possibly you had permission problems.
73's Jim

1539. looking for spare parts for TL-922 amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-22 11:30:17 UTC
From: ON5ZO <on5zo@pandora.be>
Message-ID: <dZpd8.169143$rt4.19083@afrodite.telenet-ops.be>
Source record: 46181

Dear OM

A friend of mine has a broken Kenwood TL-922 amp. The faulty part is the transformer of the power supply ("T2", according to service manual), we can tell and smell from the smoke coming out of it.
The Belgian Kenwood service center does not have this part available anymore, and according to them, both the stocks for this spare part in the USA as well as Japan are exhausted.
Now, my question is: does anyone know where to find this part, and if there is a manufacturer of equivalent transformers to replace it?

All help would be greatly appreciated!
73 de Franki ON5ZO

1540. Re: Tayloe detector as narrowband tunable filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-22 13:03:43 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0202220503.109669c8@posting.google.com>
Source record: 46182

"Richard Hosking" <zaprichardh@iinet.net.au(remove the zap)> wrote in message news:<3c75bcd2$0$3860@echo-01.iinet.net.au>...
> I think you misunderstood the setup which is difficult to explain in text.
> The filter effect works at RF
> For example, on a breadboard test with a clock of 3.5 MHz, the ouput peaked
> with an input frequency of 3.5 MHz (ie at the clock frequency) and with some
> setups (eg having an input resistor to increase the R in the RC network) a
> very sharp peak could be obtained (6 dB down at inputs of 3.5 MHz +/- 20 KHz
> or so)
> Moreover the filter can be tuned to any frequency simply by tuning the first
> mixer clock. Further filtering can be performed by making the second
> multiplexer clock at some IF (say 455 KHz) and the signal is then
> upconverted from zero to 455 KHz without image problems. (apart from
> "inband" images due to quadrature/SSB inbalance)
>
> Richard
>

I'm not an expert on such circuits but I beleive that a switched capacitor filter will respond at the clock frequency, and at harmonics of the clock frequency. If the input signal is less than half the clock frequency you can use it as a low pass filter, with a rather sharp cut-off, if I can recall correctly.

What is usually done is to put an analog filter before the thing, allowing you to select which 'mode' you want it to work in.

Jim
N8EE

1541. Re: looking for spare parts for TL-922 amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-22 14:41:58 UTC
From: w9wi@linux1.localdomain
Message-ID: <slrna7co79.c93.w9wi@linux1.localdomain>
Source record: 46183

On Fri, 22 Feb 2002 11:30:17 GMT, ON5ZO <on5zo@pandora.be> wrote:
>A friend of mine has a broken Kenwood TL-922 amp. The faulty part is the
>transformer of the power supply ("T2", according to service manual), we can
>tell and smell from the smoke coming out of it.
>The Belgian Kenwood service center does not have this part available
>anymore, and according to them, both the stocks for this spare part in the
>USA as well as Japan are exhausted.
>Now, my question is: does anyone know where to find this part, and if there
>is a manufacturer of equivalent transformers to replace it?

Ouch. (my AL-80A suffered a similar problem though luckily without smoke!)

Has he tried Peter Dahl http://www.pwdahl.com ? They've got a pretty wide
variety of transformers for amateur amplifiers. (I do wonder if it's less
expensive to buy a new amplifier than to pay the shipping charges to have a
plate transformer shipped from Texas to Belgium?!<grin>)
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

1542. Re: PIC Sources?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-22 17:08:07 UTC
From: n5kzw@arrl.net
Message-ID: <3c7679b2.576354@news.ev1.net>
Source record: 46184

Thanks Rex, and Mark. I've ussed DigiKey a lot in the past, but now
that I'm retired and trying to stay on a limited mad-money budget, I'm
much more sensitive to minimum orders and S&H charges. If I need
something that runs over $25 then I'll usually go to DigiKey first.
Otherwise I'll try Newark, Pioneer, or RadioSahck.com.

Jameco certainly looks promising, I haven't ordered anything from them
in a long time.

Thanks again,
Ed

On Wed, 20 Feb 2002 12:46:29 -0800, Rex <notreally@hotmail.invalid>
wrote:

>On Wed, 20 Feb 2002 14:26:41 GMT, n5kzw@arrl.net (Ed Bailen) wrote:
>
>>I came across a PICSTART Plus programmer and an EPROM eraser in my
>>stash of "Things I'd like to play with someday". I've downloaded the
>>latest code for the programmer, and now I need to get a PIC17C44 to
>>replace the one in the programmer.
>>
>>Can anyone recommend a favorite source for PICs (preferrably one that
>>does not have a minimum order policy or a service charge for orders
>>below $25)?
>>
>
>Digikey is one place. They are usually not the cheapest source but
>give good service. If you get the -JW (windowed eeprom) version, you
>can use it again in the future. Not cheap at $18.12. Here's a
>link...
>http://www.digikey.com/DigiHome.html
>
>If you put 17c44/jw in the search box it will take you to the
>listing.
>
>The 16F628 is a good chip to use for learning. 16F877 is a big chip
>for do everthing projects.
>
>Jameco has developer kits and proto boards:
>
>http://www.jameco.com/cgi-bin/ncommerce3/ExecMacro/Jameco/searchResult.d2w/report?sort=&s
earch=microchip
>
>https://www.jameco.com/cgi-bin/ncommerce3/ExecMacro/Jameco/home.d2w/report?cgrfnbr=874&ct

```
gys=505;560;874;
>
>-Rex, KK6MK
> [rexa -TheAtSign- Next4dnaiLetters -period- (UsualComEnd)]< my_eemale_addy
```

1543. Need to locate DTMF decoder chips...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-22 19:32:01 UTC
From: jeff <wd4nmq@earthilnk.net>
Message-ID: <3C769CC3.346019A9@earthilnk.net>
Source record: 46185

I am looking for a source for the Mitech MT8870 or the Motorola MC145436 DTMF decoder chips in small, >5 piece, quanities. I have tried Digikey, Mouser, Jameco, etc. All I can find are kits ranging from $20 to >$50. Nobody seems to have just the DTMF decoder chip available. At least in the US, found several overseas sources. But, expensive to ship here ofcourse.

Can anybody be of any help?

--
Jeff, wd4nmq
wd4nmq@earthlink.net
http://home.earthlink.net/~wd4nmq

1544. Re: Need to locate DTMF decoder chips...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-22 20:32:13 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u7dan3tasfo1e5@corp.supernews.com>
Source record: 46186

Did you try Debco in Cincinnati?

http://www.debco.com/db_online/misc.htm

..

"jeff" <wd4nmq@earthilnk.net> wrote in message
news:3C769CC3.346019A9@earthilnk.net...
> I am looking for a source for the Mitech MT8870 or the Motorola MC145436
> DTMF decoder chips in small, >5 piece, quanities. I have tried Digikey,
> Mouser, Jameco, etc. All I can find are kits ranging from $20 to >$50.
> Nobody seems to have just the DTMF decoder chip available. At least in
> the US, found several overseas sources. But, expensive to ship here
> ofcourse.
>
> Can anybody be of any help?
>
> --
> Jeff, wd4nmq
> wd4nmq@earthlink.net
> http://home.earthlink.net/~wd4nmq

1545. Re: LC VHF Bandpass Filter for 123Mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-22 20:46:08 UTC
From: aa1ll@email.com
Message-ID: <e85be400.0202221246.d39aaed@posting.google.com>
Source record: 46187

paul@paulrowe.com (Paul Rowe) wrote in message
news:<bbd01c1e.0202202126.354199f0@posting.google.com>...
> Hi all;
>..... I would
> like a bandpass filter in the front end (prior to the NE602). .....
> I would like to design such a filter using small
> pf (10-450pF) and standard H (>=.5uH). ....
.
. [...snip...]
.
> Can anyone point me in the right direction ??? I know such a filter
> is possible (I have a schematic for one), and I want to be able to
> derive one rather than "copying."
...

Hi Paul, try this URL:

http://rf.rfglobalnet.com/software_modeling/categories/2.htm

Download tunekit.zip which is a simple program to design coupled LC resonator narrowband filters. For a 123MHz center freq., BW=10MHz, the resonators are about 80pF and 17nH, coupled with approx. 4 pF caps. It also tells you how to make the coils. You'll probably have to tweak the 80pF caps for flat response no matter what.

There is some other software at that site which might help.

I have some info copied which would allow you to derive the values if you want to email me at aa1ll@email.com.

73, Paul, AA1LL
Mason, NH
http://www.qsl.net/aa1ll

1546. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-22 21:41:10 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0202221341.452d2215@posting.google.com>
Source record: 46188
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

la8ak.xnd@online.no (J M Noeding) wrote in message
news:<3c7409fa.769601@news.online.no>...

> got a tip on how to reduce noise from regulators like 78L05 to
> oscillator, you just add a saturated transistor with large reservoir
> capacitor at base - in series with the voltage from regulator. Voltage
> drop of 0.1-0.2V will improve noise sidebands a lot
>
> Jan-Martin
> LA8AK

Thanks for the idea, Jan-Martin. Do you have an explanation why it
works, and any figures on the improvement in noise?

Regards,

Mike Monett

1547. Re: Tayloe detector as narrowband tunable filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-22 23:40:01 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c76d5b7$0$6346@echo-01.iinet.net.au>
Source record: 46189

Jim
I guess the Tayloe circuit could be looked at as a quadrature switched capacitor filter
So the source of some of our noise may be Audio getting through the Tayloe detector
Perhaps we should put an analogue high pass filter in front of the first set of mixers

Richard

"JLB" <jim.bolinger@lintek.aeroflex.com> wrote in message news:8d5ec8a2.0202220503.109669c8@posting.google.com...
> "Richard Hosking" <zaprichardh@iinet.net.au(remove the zap)> wrote in message news:<3c75bcd2$0$3860@echo-01.iinet.net.au>...
> > I think you misunderstood the setup which is difficult to explain in text.
> > The filter effect works at RF
> > For example, on a breadboard test with a clock of 3.5 MHz, the ouput peaked
> > with an input frequency of 3.5 MHz (ie at the clock frequency) and with some
> > setups (eg having an input resistor to increase the R in the RC network) a
> > very sharp peak could be obtained (6 dB down at inputs of 3.5 MHz +/- 20 KHz
> > or so)
> > Moreover the filter can be tuned to any frequency simply by tuning the first
> > mixer clock. Further filtering can be performed by making the second
> > multiplexer clock at some IF (say 455 KHz) and the signal is then
> > upconverted from zero to 455 KHz without image problems. (apart from
> > "inband" images due to quadrature/SSB inbalance)
> >
> > Richard
> >
>
> I'm not an expert on such circuits but I beleive that a switched
> capacitor filter will respond at the clock frequency, and at harmonics
> of the clock frequency. If the input signal is less than half the
> clock frequency you can use it as a low pass filter, with a rather
> sharp cut-off, if I can recall correctly.
>
> What is usually done is to put an analog filter before the thing,
> allowing you to select which 'mode' you want it to work in.
>

> Jim
> N8EE

1548. Re: Need to locate DTMF decoder chips...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 01:09:40 UTC
From: markaren1@earthlink.net
Message-ID: <633f2e5d.0202221709.3a9c2c18@posting.google.com>
Source record: 46190

http://bgm.bgmicro.com/ - search on 'DTMF'

Mark.

jeff <wd4nmq@earthilnk.net> wrote in message news:<3C769CC3.346019A9@earthilnk.net>...
> I am looking for a source for the Mitech MT8870 or the Motorola MC145436
> DTMF decoder chips in small, >5 piece, quanities. I have tried Digikey,
> Mouser, Jameco, etc. All I can find are kits ranging from $20 to >$50.
> Nobody seems to have just the DTMF decoder chip available. At least in
> the US, found several overseas sources. But, expensive to ship here
> ofcourse.
>
> Can anybody be of any help?

1549. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 01:14:04 UTC
From: la8ak.xnd@online.no
Message-ID: <3c76c806.168116828@news.online.no>
Source record: 46191
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On 22 Feb 2002 13:41:10 -0800, mrmonett@yahoo.com (Mike Monett) wrote:

>la8ak.xnd@online.no (J M Noeding) wrote in message
news:<3c7409fa.769601@news.online.no>...
>
>> got a tip on how to reduce noise from regulators like 78L05 to
>> oscillator, you just add a saturated transistor with large reservoir
>> capacitor at base - in series with the voltage from regulator. Voltage
>> drop of 0.1-0.2V will improve noise sidebands a lot
>>
>> Jan-Martin
>> LA8AK
>
>Thanks for the idea, Jan-Martin. Do you have an explanation why it
>works, and any figures on the improvement in noise?
>
>Regards,
>
>Mike Monett

amother friend (LA7MI) mentioned that it wasn't a new idea, it is
mentioned in VCO catalogue from Mini-Circuits

Any impedance will improve, but it is some different opinions whether
it is wise to let the transistor saturate, the gain will also be lower
and effective capcity lower.

Such capacity multiplication is also used in Drake R-4C receiver +12V
power supply, but consumed lot of power since it was current fed from
+125V

Jan-Martin
LA8AK
--
remove ,xnd to reply

1550. Armageddon circular calculator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 01:21:22 UTC
From: "news.bellatlantic.net" <vze3kq35@verizon.net>
Message-ID: <m8Cd8.29$Vc.2@nwrddc03.gnilink.net>
Source record: 46192

someone had this calculator for sale, perhaps some of you old timers will remember it. Times the radiation dosage. I can remember drills in grade school:
http://www.tech-diy.com/armageddon_timer.htm

1551. Re: FS: EPROM eraser, and PIC chips

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 01:24:09 UTC
From: Mike Hall <mghall@enteract.com>
Message-ID: <3C76EF39.42ED13A3@enteract.com>
Source record: 46193
Cross-posted to: chi.forsale,sci.electronics.equipment,rec.radio.amateur.homebrew

Mike Hall wrote:

> DataErase II ACT EPROM eraser:
> Miscellaneous MicroChip PIC parts and boards

All sold, thanks!

1552. need metron MA-1000B amp schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 01:40:41 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3C76F319.4F159D72@charter.net>
Source record: 46194
Cross-posted to: rec.radio.swap,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

does any one have a copy of the schematic will glady pay copying fees
and postage.
thanks chris NI4L

--

NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
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Custom made to YOUR FREQUENCY of operation
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Click here for more info... <http://www.angelfire.com/nb/ni4l/>

1553. Re: Visual Basic and Sound Cards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 02:30:48 UTC
From: Richard Crowley <rcrowley7@xprt.net>
Message-ID: <u7dvmrd5o6dj12@corp.supernews.com>
Source record: 46195

"JLB" wrote ...
> Don't mean to get testy here, but my question was about using
> ***Visual Basic*** from ***inside Excel***, not C++!!!

Have you never learned to translate interface specs from C++ to VB? If not, then you will have a very difficult time trying to use VB for any but the most mundane tasks. Most of the interesting parts of computing are documented in C++. That doesn't mean that people USE that language, it is merely a standardized format.

For example virtually all of the API (application program interface) in MS Windows is documented in C++ even though it is used by tens of thousands of VB programmers and programs. There are resources out there that help "translate". The MSDN library is very helpful. However I'm pretty sure the basic info is available free on the MS web.

If you mean "Visual Basic for Applications" (VBA) (your reference "inside Excel"), it wouldn't surprise me if this were impossible. I don't believe VBA is powerful/rich/flexible enough to interface directly to IO hardware. VBA is an application scripting language and is a limited subset of the "real" version.

In that case, Ms. Halliday's suggestion of parsing a WAV file is probably your only practical solution. Information on WAV file format is also readily available on the web. I would suspect that you COULD write VBA code that would parse WAV format.

RC

1554. links to manuals from the military

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 02:55:48 UTC
From: "news.bellatlantic.net" <vze3kq35@verizon.net>
Message-ID: <UwDd8.3086$Hg1.2558@nwrddc02.gnilink.net>
Source record: 46196

Gomer Pyle said "Well, I'll be darned..." This EBay seller has listed the URL's for several publicly accesible military sites for test equipment manuals on one of his auctions. Save to your bookmarks the URL's he cites.

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1707331805

1555. Now we know how much MRF138s are worth

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 03:37:04 UTC
From: -Your Friend Bill- <none@coqui.net>
Message-ID: <3C770E60.2AD80544@coqui.net>
Source record: 46097

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1333352146

1556. Re: Now we know how much MRF138s are worth

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 03:56:26 UTC
From: jcplpsm@aol.communicate
Message-ID: <20020222225626.17487.00000104@mb-cr.aol.com>
Source record: 46098

> Now we know how much MRF138s are worth

Yup. The market speaks.

1557. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 09:16:58 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <76ke7ucmlpsqgmp3vkh4pa4e7ka5qf3p87@4ax.com>
Source record: 46099
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On 22 Feb 2002 13:41:10 -0800, mrmonett@yahoo.com (Mike Monett) wrote:

>la8ak.xnd@online.no (J M Noeding) wrote in message
news:<3c7409fa.769601@news.online.no>...
>
>> got a tip on how to reduce noise from regulators like 78L05 to
>> oscillator, you just add a saturated transistor with large reservoir
>> capacitor at base - in series with the voltage from regulator. Voltage
>> drop of 0.1-0.2V will improve noise sidebands a lot
>>
>> Jan-Martin
>> LA8AK
>
>Thanks for the idea, Jan-Martin. Do you have an explanation why it
>works, and any figures on the improvement in noise?

This is a really old circuit. I has been used in power supplies long before the zener diode became a common component. A series pass transistor with a low resistance resistor from collector to base would drive the transistor into saturation, however, adding a big capacitor from base to ground will create a RC network followed by an emitter follower.

Or looking at it differently, during the peaks of the rectified 100/120Hz ripple, some of the current is required to charge the capacitor, thus preventing the transistor from going into saturation. During the low parts of the ripple, the capacitor will supply most of the base current to the transistor, possibly driving it into saturation.

I think this circuit was called a capacitance multiplier, since the ripple rejection was similar to a big capacitor with a capacitance equivalent to the real capacitor multiplied by the current gain of the transistor. Thus with a real 220 uF capacitor, you could get a 22000 uF virtual capacitor if the transistor beta was 100.

Unfortunately some misunderstood this circuit and thought that they could get away with the big storage capacitor and only use this virtual capacitor :-). However, when the collector voltage drops below the capacitor voltage on the base during the bottom of the ripple cycle, the transistor no longer conducts and the charge within the small capacitor is quickly discharged though the base-emitter diode and the load and the voltage drops very quickly.

This kind of circuit disappeared very quickly when the zener diode become popular.

The idea of using this circuit as a low noise oscillator power supply postregulator is very interesting since a small, low inductance, low ESR capacitor could be used, thus, you could have a nearly ideal 100-300 uF virtual capacitor.

However, what is the point of driving the transistor into saturation ? This will reduce the current gain and thus reduce the size of the virtual capacitor. Keeping the transistor in the linear region by limiting the base current below saturation will require a larger Vce voltage drop. If the load current varies, limiting the base current below saturation will also affect the voltage regulation, but this can be partly compensated with a resistor from base to ground as was done in some early designs.

Paul OH3LWR

1558. Ham Radio Circuits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 12:09:44 UTC
From: flashwebhost@yahoo.com
Message-ID: <adf4b49f.0202230409.7f63041a@posting.google.com>
Source record: 46100

FlashWebHost.com Ham Radio Circuits Page

Circuit Digram of 7 MHz SSB Transceiver, DSB Transmitter, Antennas, Morse Code Tutor, Ceramic Filter BFO, QRP Keyer, RF Dummy Load and more...

Visit

http://www.flashwebhost.com/circuit/

1559. Re: Yaesu FT-757GX PLL jumping freq. (alignment hints ??)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 14:44:16 UTC
From: WS <w9bbb@megsinet.net>
Message-ID: <3c77aa01$0$98142$1dc6e903@news.corecomm.net>
Source record: 46101
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Hey Doug,
Alignment is not the answer.Component is failing in PLL.Look for a site
that has mods for Yaesu.WS

Douglas Snowden wrote:

> I have a FT757GX that will drift up and down a khz or so after
> it has been on for some time. Some times it takes quite a while
> (more than an hour) to drift, if at all. I suspect that since it is such a
> compact radio the VCO is getting warm. I have a RF VTVM
> and freq counter. Before going in a trying an alignment, is there
> anything I should know or be wary of? I have the Tech supplement
> that gives an aligment procedure. Just trying to be cautious. Looks
> like just taking it apart might be a chore.
>
> 73 Doug N4IJ
>
>
>
>
>
>

1560. Akron OH Junque Emporiums?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 14:56:35 UTC
From: BFHawkins <not@aol.com>
Message-ID: <3c77ada2$0$1599$ac966d11@news.raex.com>
Source record: 46102

Hi Group!

Does anyone know of any fun electonics junque/surplus places to visit in
the Akron OH area.

TIA to all who respond.

Best regards,
BFHawkins

1561. WTB PYE 19" Rack cabinet (49 x 30.2 x 30.8 cm)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 15:35:21 UTC
From: Richard Daventry <newsgps_email@ntlworld.com>
Message-ID: <uDOd8.22169$hM6.2780796@news6-win.server.ntlworld.com>
Source record: 46103
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

I need at least one more PYE 19" rack cabinet to match the 2 I already have. Size is 49cm wide, 30.2cm high and 30.8 cm deep (not measuring the back panel that sticks out another 7 cm). Says, "PYE Communications Equipment" at front of cabinet. Ventilation grill covers backhalf of top panel. Be particularly nice if any source is say 30 miles of Wakefield in West Yorkshire, (but perhaps unlikely).

I suppose if you have a cabinet it may contain some older PYE/PHILIPS gear. I'd buy that if cheap (just to get the cabinet!!). Thanks. Rich.

1562. Re: David Hendon to leave RA - g0crw.jpg (0/1)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 15:48:58 UTC
From: babel@fish.org
Message-ID: <scef7ugtnneh1e9csubrh2eh5d3kpphv0t@4ax.com>
Source record: 46104

On Fri, 22 Feb 2002 05:07:03 GMT, "Jim Hill, w6ivw"
<Xslimjimzz@home.com> wrote:

>On Tue, 19 Feb 2002 01:42:26 GMT, r9c9nixon@mi9nd9spring.com (Russell
>C. Nixon) wrote:
>
>>That's funny, on Monday, 02/18/2002 at 20:40 EST I get to a webpage
>>owned by Al Waller and contains information of use to hams.
>>
>>babel@fish.org wrote:
>>
>>>On Mon, 18 Feb 2002 14:02:49 -0000, "ham" <nospam@nospam.com> wrote:
>>>
>>>>check out STOP PRESS at www.qsl.net/g0crw
>>>> for more details
>>>>
>>>This makes 2 or 3 posts referenceing 'qsl.net'. I've gone over there
>>>and found _only_ a portal containing gambling links and some possibly
>>>"adult" links. My guess is it's either a cross-post intended for
>>>some 'amateur' porn group or someone is trying to shill hits on that
>>>page.
>>>it's a loser!
>>>
>>
>>Russ
>>"Two-fifteen, no ambulance needed!"
>>Subtract all nines to reply
>
>I checked too. http://www.qsl.net/ brings up a valid ham radio
>oriented page. http://www.qsl.net/g0crw/ brings up the CROWBOROUGH
>AMATEUR RADIO page with a statement in the left column saying
>Forbidden
>
>You don't have
>permission to access
>/cgi-bin/freestats-bin/do/get_code.cgi
>on this server.
>
>Possibly you had permission problems.
>73's Jim

Ok, I went there again and found only a portal. I have attempted to
attach a JPG of what I found. If anyone can tell me what I'm missing,
I'll be very grateful!!

1563. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 15:51:58 UTC
From: Win Hill <whill@mediaone.net>
Message-ID: <3C77B901.9ED85A05@mediaone.net>
Source record: 46105
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Paul Keinanen wrote:
>
> mrmonett@yahoo.com (Mike Monett) wrote:
>
>> la8ak.xnd@online.no (J M Noeding) wrote
>>
>>> got a tip on how to reduce noise from regulators like 78L05 to
>>> oscillator, you just add a saturated transistor with large reservoir
>>> capacitor at base - in series with the voltage from regulator.
>>> Voltage drop of 0.1-0.2V will improve noise sidebands a lot
>>>
>>> Jan-Martin
>>> LA8AK
>>
>> Thanks for the idea, Jan-Martin. Do you have an explanation why it
>> works, and any figures on the improvement in noise?
>
> This is a really old circuit. I has been used in power supplies long
> before the zener diode became a common component. A series pass
> transistor with a low resistance resistor from collector to base would
> drive the transistor into saturation, however, adding a big capacitor
> from base to ground will create a RC network followed by an emitter
> follower.
>
> Or looking at it differently, during the peaks of the rectified
> 100/120Hz ripple, some of the current is required to charge the
> capacitor, thus preventing the transistor from going into saturation.
> During the low parts of the ripple, the capacitor will supply most of
> the base current to the transistor, possibly driving it into
> saturation.
>
> I think this circuit was called a capacitance multiplier, since the
> ripple rejection was similar to a big capacitor with a capacitance
> equivalent to the real capacitor multiplied by the current gain of the
> transistor. Thus with a real 220 uF capacitor, you could get a 22000
> uF virtual capacitor if the transistor beta was 100.
>
> Unfortunately some misunderstood this circuit and thought that they
> could get away with the big storage capacitor and only use this
> virtual capacitor :-). However, when the collector voltage drops below
> the capacitor voltage on the base during the bottom of the ripple
> cycle, the transistor no longer conducts and the charge within the

> small capacitor is quickly discharged though the base-emitter diode
> and the load and the voltage drops very quickly.
>
> This kind of circuit disappeared very quickly when the zener diode
> become popular.
>
> The idea of using this circuit as a low noise oscillator power supply
> postregulator is very interesting since a small, low inductance, low
> ESR capacitor could be used, thus, you could have a nearly ideal
> 100-300 uF virtual capacitor.
>
> However, what is the point of driving the transistor into saturation ?
> This will reduce the current gain and thus reduce the size of the
> virtual capacitor. Keeping the transistor in the linear region by
> limiting the base current below saturation will require a larger Vce
> voltage drop. If the load current varies, limiting the base current
> below saturation will also affect the voltage regulation, but this can
> be partly compensated with a resistor from base to ground as was done
> in some early designs.
>
> Paul OH3LWR

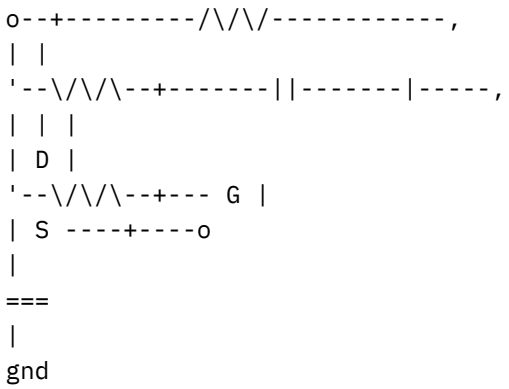
The circuit you describe has a drop of Vbe + R*Ib, which may be closer to 1.0V than to 0.1 or 0.2V as Jan-Martin describes. Jan-Martin must be thinking of a pnp transistor with its emitter as the input, hence the saturated operation. Offhand, I don't see how such a scheme could reduce ripple. The active filter you describe Paul on the other hand works very well. Of course the transistor base-voltage point must be low enough not to get C-E saturation from the ripple valleys at maximum load, but this is easily done by adding a resistor to ground. For high-voltage supplies I like to use a MOSFET and thereby get an instant 3 to 4V drop, usually solving the problem, while allowing much higher R and even a smaller C.

Another very useful enhancement is to divide the input resistor in two and filter that node with a capacitor to the quieted follower output. This creates a 2-pole filter which further reduces the output ripple, especially the sharply-rising charging edge which is highly attenuated by the -12dB/octave rolloff.

As for this circuit disappearing quickly when the zener diode became popular, hah! the zener has been with us for far longer than the BJT power transistor, it was the power IC regulator which supplanted this circuit. However I still use it for the common case where I want all the output voltage that's practically available from the supply storage capacitors, and simply want to eliminate any ripple noise.

The main thing it lacks is current-limiting, but I solve this by adding a series collector (drain) resistor sized to drop 0.5 to 1V under normal load. This resistor saturates the transistor upon a load fault, so that no heat sink is required on the pass transistor. Of course this resistor

itself must have a serious power rating (or one may be happy to let it to go up in smoke, protecting the pass transistor!).



A further enhancement is to add an output current-sense resistor plus a small current-limiting transistor, plus two more resistors to create a foldback current limit, solving the smoking-resistor problem. At this point a heat sink will no doubt be required for the transistor. A gate protection zener may be a good idea for the MOSFET. It's at this point that one looks at all the parts drawn on the sheet of paper and begins to reconsider a simple IC regulator, with built-in thermal limiting.

:-)

Thanks, /.-.\
((( ))
- Win \\\//
\\\
Winfield Hill //\\\
Rowland Institute for Science /// \\\
Cambridge, MA \/ \/

1564. Re: David Hendon to leave RA

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 15:54:21 UTC
From: babel@fish.org
Message-ID: <6gef7ukc0lebpeu8vpg0ouddc26kjgr0kp@4ax.com>
Source record: 46106

On Fri, 22 Feb 2002 05:07:03 GMT, "Jim Hill, w6ivw"
<Xslimjimzz@home.com> wrote:

>On Tue, 19 Feb 2002 01:42:26 GMT, r9c9nixon@mi9nd9spring.com (Russell
>C. Nixon) wrote:
>
>>That's funny, on Monday, 02/18/2002 at 20:40 EST I get to a webpage
>>owned by Al Waller and contains information of use to hams.
I tried to attach a JPG of that webpage hoping that someone would tell
me what I've done wrong. I do not see any ham related stuff there.
The newswerver would not attach the JPG of that web page. Here is a
text copy of it:

http://www.qsl.net/g0crw
(These following things are copies of most of the links found on the
URL listed above):

ï¿½ Travel Agent
ï¿½ Take a Family Vacation
ï¿½ Discount Flights
ï¿½ Travel Packages

ï¿½ Hot Makeup:New Colour Collection
ï¿½ Get Smooth Healthy Skin
ï¿½ Buy Fragrances Online
ï¿½ Lipstick, Mascara, & Nail Polish

ï¿½ Video Slots
ï¿½ Blackjack, Poker, Craps
ï¿½ Roulette
ï¿½ Play Casino Games

ï¿½ life insurance quote
ï¿½ auto insurance quote
ï¿½ health insurance quote
ï¿½ home insurance quote

ï¿½ Home Equity Loans
ï¿½ Second Mortgages
ï¿½ Home Improvement Loan
ï¿½ Apply for a Home Loan

ï¿½ Compare Auto Insurance
ï¿½ Car Insurance Quote
ï¿½ Best Car Insurance Rates
ï¿½ Online Auto Insurance

ï¿½ Blackjack, Poker, Craps
ï¿½ Casino Games
ï¿½ 20% Bonus on Your First Deposit
ï¿½ Play Blackjack

ï¿½ Discount Hotel Rates
ï¿½ Lowest Room Rates
ï¿½ Florida Hotels
ï¿½ Las Vegas Hotels

ï¿½ Foreclosures in your Area
ï¿½ Commercial Foreclosures
ï¿½ Foreclosure Listings
ï¿½ Save on a Home

1. Family Vacation
2. Free Credit Check
3. New Orleans Travel
4. Hotel Rooms
5. Las Vegas Vacation
6. Credit Report Free
7. Romantic Getaway
8. Free Credit Rating
9. New Orleans Jazz
10. Air Travel

ï¿½ Online Gambling
ï¿½ Play Poker
ï¿½ Video Slots
ï¿½ Casino Games
ï¿½ Casino Games

ï¿½ NHL Hockey Betting
ï¿½ Wager on NFL Games
ï¿½ College Football Betting
ï¿½ NHL Hockey Betting
ï¿½ Wager on NFL Games

ï¿½ Discount Hotels Las Vegas
ï¿½ Discount Hotels Las Vegas

1565. Re: News Update for www.ab7sl.com

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 17:04:04 UTC
From: Brian Short <k7on@earthlink.net>
Message-ID: <MPG.16e1d8feff3ccfd09896d0@news.earthlink.net>
Source record: 46107
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

Charlie:

You are quite an advertiser of your web site.

Maybe you could put a link to my page?

Brian

In article <3c77c5d9$1@news.bnb-lp.com>, ctj92@cableone.net says...
> Some new stuff and some updates since last month....
> found at http://www.ab7sl.com
>
> 1. NEW - Cushcraft R7 / R7000 page.
> includes black box photos and component values
> w/schematic also R7 / R7000 instruction and assembly manuals
> Note: (all downloadable too..)
>
> 2. Prescott, Arizona Page has many all-new photos
>
> 3. Equipment Photos Page has some all-new photos added
>
> 4. Downloadable DXCC List updated - 16-Feb-2002
>
> 5. AB7SL - DXCC "Need List" - pls check it out....
>
> 6. Weather Page has real-time conditions for 12 selected US cities
> and links for complete USA / World real-time weather data
>
>
>
> --
>
> 73 / DX
>
> Charles T Johnston
> Prescott, Arizona - U.S.A.
> charles@ab7sl.com
>
> AB7SL - Ham Radio Pages
> Official W9INN Antennas Page
> www.ab7sl.com

--
People who think they know it all are annoying

to those of us who do.
--
See my web page: http://www.qsl.net/k7on/
--

1566. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 18:13:21 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0202231013.592c8072@posting.google.com>
Source record: 46108
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Win Hill <whill@mediaone.net> wrote in message news:<3C77B901.9ED85A05@mediaone.net>...

> It's at this point
> that one looks at all the parts drawn on the sheet of paper and begins
> to reconsider a simple IC regulator, with built-in thermal limiting.
>
> :-)
> ___
> Thanks, /.-.\
> ((( ))
> - Win \\\//
> \\\
> Winfield Hill //\\\
> Rowland Institute for Science /// \\\
> Cambridge, MA \/ \/

Thanks for the excellent post, as usual. Now that we're back to a
conventional ic regulator, how do you reduce the output noise:)

Best Regards,

Mike Monett

1567. 10.7 Mhz IF and HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 18:20:31 UTC
From: paul@paulrowe.com
Message-ID: <bbd01c1e.0202231020.45d18000@posting.google.com>
Source record: 46109

Dumb Question: Is it bad to use a 10.7 Mhz IF for a HF receiver?
What are the pros and cons compared to 455Khz ? Any response
appreciated. Thanks.

paul@paulrowe.com

1568. Re: 10.7 Mhz IF and HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 19:47:32 UTC
From: Peter Rachow <peter.rachow@t-online.de>
Message-ID: <a58ri8lbm02$1@news.t-online.com>
Source record: 46110

Paul,

the higher you choose your IF, the fewer problems you will face with the so called "image" frequency. This the second frequency that you're always receiving unwantedly with a superhet. Due to the fact that your superhet receives f1 + f2 *and* f1-f2 you will hear two signals.

Calculation sample:

fRX = 14.100 MHz
fIf = 455 kHz
required fOsz. = 14.555 Mhz

Image frequency = 14.100 MHz - 0.455 kHz = 13.645 MHz

So your superhet theoretically is able to receive 2 separate frequencies. The higher your if is the more the unwanted signal will be filtered by your input selective circuits (LC-filters) becaus the band distance doubles with each kHz the if is higher.

Next Problem: A high if requires good IF-filters, because it is not so easy to filter high frequencies with standard LC-circuits (as they are common for 455 kHZ). Therefore crystal filters are commonly preferred here. A double superhet sometimes is a good solution but has a seriuos shortcoming: More self generated intermodulation products that are falling into the received band.

hth es 73!

Peter

DK7IH
--
http://www.peter-rachow.de

1569. Re: 10.7 Mhz IF and HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 20:57:07 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u7g0haej24811d@corp.supernews.com>
Source record: 46111

Peter explained it pretty well, I think.

But better receivers today typically have 3 IFs ... usually the first is in the 60 MHz range. I'm not so sure I know why that is. The second is generally in the 10 MHz neighborhood, and the third is typically 455 or so.

Peter explained why a first IF of 455 is a problem. It's tough to get good image rejection at that frequency. But there is another side to the problem that makes the 10 MHz IF a problem. While crystal filters are possible, and even necessary in many cases, for a 10 MHz IF, getting the right shape can be a problem. This is especially a problem for SSB on the ham bands, where you need a nice flat passband with steep skirts. It's much easier to make this sort of filter for a low IF than for a high. So many receivers use a 10 MHz (or so) IF to get rid of signals that are a little way from the desired signal, as well as images, then the 455 to whack out the close in interference.

This is less of a problem for CW. On CW, you really don't need the flat passband, a pointy-topped filter is pretty acceptable. This is easy to get by stringing together a few matched crystals. So many receivers intended for CW only have only a single IF, typically in the 10 MHz neighborhood, with a multipole crystal filter that gets you both image and near signal rejection.

It would seem like the availability of parts for 10.7 MHz IF's would make that a popular frequency. However, what is available is often for FM receivers that need a very wide passband, so selecting 10.7 specifically really doesn't turn out to be a big advantage. As a result, frequencies like 10, 9, and 4.9152 are a lot more popular for amateur band receivers.

..

"Paul Rowe" <paul@paulrowe.com> wrote in message
news:bbd01c1e.0202231020.45d18000@posting.google.com...
> Dumb Question: Is it bad to use a 10.7 Mhz IF for a HF receiver?
> What are the pros and cons compared to 455Khz ? Any response
> appreciated. Thanks.
>
> paul@paulrowe.com

1570. Re: 10.7 Mhz IF and HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 21:19:30 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C780816.3D44@pop.removethistomailme.net>
Source record: 46112

xpyttl wrote:
>
> Peter explained it pretty well, I think.
>
> But better receivers today typically have 3 IFs ... usually the first is in
> the 60 MHz range. I'm not so sure I know why that is.

Saves money on front-end filtering. With (say) a 75-105 MHz LO and 70 MHz 1st IF, a fixed low-pass filter is enough to handle the whole HF spectrum without any image responses. No preselection required.

Of course, VHF local oscillators are almost inevitably noisier than HF ones, so reciprocal mixing can be a problem. And without any preselection at all, you need a much stouter mixer with more LO drive to keep IMD under control. No free lunches in the radio business!

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1571. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 21:24:56 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C78095E.21FD@pop.removethistomailme.net>
Source record: 46113
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett wrote:
>
> Thanks for the excellent post, as usual. Now that we're back to a
> conventional ic regulator, how do you reduce the output noise:)

And, more to the point, why doesn't anyone sell a low-noise 3-terminal regulator? The old-school LM723 is not a very elegant solution considering the number of pins and amount of support circuitry that chip requires.... yet it still seems to be the only game in town for low-noise regulation.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1572. ARRL again affirms eQSL Cards -OK- for DXCC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 21:46:18 UTC
From: Charles Johnston <ctj92@cableone.net>
Message-ID: <3c780dab$1@news.bnb-lp.com>
Source record: 46114
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

The ARRL has recently reaffirmed just one week after the original historic announcement (08-Feb-2002) that eQSL Cards - ARE - accepted for DXCC....this remark from the eQSL Webmaster found at this

URL: http://www.eqsl.cc/qslcard/comments.cfm
"ARRL reaffirmed today that it will accept eQSLs that are mailed. AG or not" (Webmaster)
15-Feb-2002

--

73 / DX

Charles T Johnston
Prescott, Arizona - U.S.A.
charles@ab7sl.com

AB7SL - Ham Radio Pages
Official W9INN Antennas Page
www.ab7sl.com

1573. Re: 10.7 Mhz IF and HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-23 22:48:31 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0202231448.1eb5374e@posting.google.com>
Source record: 46115

paul@paulrowe.com (Paul Rowe) wrote in message
news:<bbd01c1e.0202231020.45d18000@posting.google.com>...
> Dumb Question: Is it bad to use a 10.7 Mhz IF for a HF receiver?
> What are the pros and cons compared to 455Khz ? Any response
> appreciated. Thanks.
>
> paul@paulrowe.com

At this point in time, I think you'd rather go with an IF in
the MHz range, unless there was a specific reason not to. Remember,
that 455KHz IFs date from when it was easier to go low in frequency
to get the required bandwidth, and when crystal filters in the HF range
came along, they gave the needed bandwidth. And you benefitted from
much better image rejection. If you read reviews of low end shortwave
receivers from the sixties, they'll often note very low image rejection
on the highest band. Going to an HF range IF means you don't have
to put a lot of effort into the front end in order to reduce the image
sufficiently.

Some people will say that a Collins mechanical filter which would be
at 455Khz or 500KHz, are a better choice than a crystal filter. But
at this point in time, you'd want to go with a double conversion scheme,
which is what's happening in commercial receivers that still use 455KHz
IFs. In those, the low IFs are often for some extra feature, like
passband tuning, where the added conversion is already needed.
(Note that most consumer AM broadcast band receivers and low end
Shortwave receivers still use 455KHz IFs, and one can assume that
it's due to reasons of economics. Certainly enough time has been put
into designing AM BCB receivers, so they know how to work around the
image problem, and 455KHz is such a common IF that ceramic filters
are plentiful for AM-bandwidth.)

One significant problem of an IF in the HF range is that if the receiver
is general coverage, you'll have a hole in the coverage. You're going
to have problems with reception right around the IF. But if you are
only covering some segments of the HF range, such as the hambands,
then an HF range IF gives you better image rejection, and an easier
design.

Nowadays, a lot of receivers have the first IF above the HF range, so
there isn't that hole in the tuning range. Of course, these tend to
be general coverage receivers. The disadvantage is that you need
a much higher local oscillator frequency for that first mixer,
and so there'll be complication there.

Unless you are just using the 10.7MHz IF as a first IF, and a second conversion to some other frequency for ultimate selectivity, you might want to reconsider the frequency. I don't think there is a wide selection of filters on that center frequency. Most common, you'll find FM-bandwidth filters, which would only be useful for FM. Certainly you're more likely to find AM, SSB and CW bandwidth filters at 9Mhz than 10.7.

(And they are likely to be expensive, unless you can find surplus filters. That is an advantage of 455KHz (or the similarly used 450KHz); you can probably scrounge up a number of filters for less than doing the same in the HF range. Certainly AM-bandwidth filters are easy to come by, and I think you can find narrower filters in CB sets. For a good CW or SSB filter, you could find a used mechanical filter. So the choice of IF may depend on whether you can get by with one filter, or need different bandwidths.)

A lot of people seem to be building their own ladder filters, which seem to be easier to build than the old lattice filters from the early days of SSB. Since they depend on a good number of cheap crystals, the IF frequency is chosen because the crystals are available. For a ham band receiver, the exact IF frequency won't matter so long as it's not in a ham band, and you do some calculations to make sure don't end up with some weird response when the IF and local oscillator mix together.

Michael VE2BVW

1574. Re: 10.7 Mhz IF and HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 02:43:27 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C78534F.F98C7D08@ieee.org>
Source record: 46116

This is the "principle of the conservation of difficulty". Difficulty, like
energy cannot be created nor destroyed.

Clyde
KA1CRV

P. S. Not an original statement.... Not sure of the source.

John Miles wrote:

> xpyttl wrote:
> >
> > Peter explained it pretty well, I think.
> >
> > But better receivers today typically have 3 IFs ... usually the first is in
> > the 60 MHz range. I'm not so sure I know why that is.
>
> Saves money on front-end filtering. With (say) a 75-105 MHz LO and 70
> MHz 1st IF, a fixed low-pass filter is enough to handle the whole HF
> spectrum without any image responses. No preselection required.
>
> Of course, VHF local oscillators are almost inevitably noisier than HF
> ones, so reciprocal mixing can be a problem. And without any
> preselection at all, you need a much stouter mixer with more LO drive to
> keep IMD under control. No free lunches in the radio business!
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

1575. Re: looking for spare parts for TL-922 amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 03:01:06 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <a59l1bfpo1@slb2.atl.mindspring.net>
Source record: 46117

Thread:

Failed transformers. In the "old days" we used to re-wind them. I've done
a few myself.

You loosen up the windings and insulation by burning it out with a blow
torch, then measure the wire size, un-wind it, re-insulate and re-wind it.

Remember to count the turns and make a drawing of the winding layups as you
unwind it...

It's fun... and you can often make it better than new.

--Peter K1PO

"ON5ZO" <on5zo@pandora.be> wrote in message
news:dZpd8.169143$rt4.19083@afrodite.telenet-ops.be...
> Dear OM
>
> A friend of mine has a broken Kenwood TL-922 amp. The faulty part is the
> transformer of the power supply ("T2", according to service manual), we
can
> tell and smell from the smoke coming out of it.
> The Belgian Kenwood service center does not have this part available
> anymore, and according to them, both the stocks for this spare part in the
> USA as well as Japan are exhausted.
> Now, my question is: does anyone know where to find this part, and if
there
> is a manufacturer of equivalent transformers to replace it?
>
> All help would be greatly appreciated!
> 73 de Franki ON5ZO
>
>

1576. Re: David Hendon to leave RA

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 03:06:48 UTC
From: john graesser <graesser@tca.net>
Message-ID: <u7gm5opbttci27@corp.supernews.com>
Source record: 46118

Sounds like the DNS your ISP is using is farked. I tried it and went to a amateur radio club site.
thanks, John.
KC5DWD

<babel@fish.org> wrote in message news:6gef7ukc0lebpeu8vpg0ouddc26kjgr0kp@4ax.com...
> On Fri, 22 Feb 2002 05:07:03 GMT, "Jim Hill, w6ivw"
> <Xslimjimzz@home.com> wrote:
>
> >On Tue, 19 Feb 2002 01:42:26 GMT, r9c9nixon@mi9nd9spring.com (Russell
> >C. Nixon) wrote:
> >
> >>That's funny, on Monday, 02/18/2002 at 20:40 EST I get to a webpage
> >>owned by Al Waller and contains information of use to hams.
> I tried to attach a JPG of that webpage hoping that someone would tell
> me what I've done wrong. I do not see any ham related stuff there.
> The newswerver would not attach the JPG of that web page. Here is a
> text copy of it:
>
> http://www.qsl.net/g0crw
> (These following things are copies of most of the links found on the
> URL listed above):
>
> • Travel Agent
> • Take a Family Vacation
> • Discount Flights
> • Travel Packages
>
> • Hot Makeup:New Colour Collection
> • Get Smooth Healthy Skin
> • Buy Fragrances Online
> • Lipstick, Mascara, & Nail Polish
>
> • Video Slots
> • Blackjack, Poker, Craps
> • Roulette
> • Play Casino Games
>
>
>
> • life insurance quote
> • auto insurance quote
> • health insurance quote

> • home insurance quote
>
> • Home Equity Loans
> • Second Mortgages
> • Home Improvement Loan
> • Apply for a Home Loan
>
> • Compare Auto Insurance
> • Car Insurance Quote
> • Best Car Insurance Rates
> • Online Auto Insurance
>
>
>
> • Blackjack, Poker, Craps
> • Casino Games
> • 20% Bonus on Your First Deposit
> • Play Blackjack
>
> • Discount Hotel Rates
> • Lowest Room Rates
> • Florida Hotels
> • Las Vegas Hotels
>
> • Foreclosures in your Area
> • Commercial Foreclosures
> • Foreclosure Listings
> • Save on a Home
>
>
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>
>
> 1. Family Vacation
> 2. Free Credit Check
> 3. New Orleans Travel
> 4. Hotel Rooms
> 5. Las Vegas Vacation
> 6. Credit Report Free
> 7. Romantic Getaway
> 8. Free Credit Rating
> 9. New Orleans Jazz
> 10. Air Travel
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> • Online Gambling
> • Play Poker
> • Video Slots
> • Casino Games
> • Casino Games
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> • NHL Hockey Betting
> • Wager on NFL Games
> • College Football Betting
> • NHL Hockey Betting
> • Wager on NFL Games
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>
>
> • Discount Hotels Las Vegas
> • Discount Hotels Las Vegas
>
>
>

1577. rtx109

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 03:58:08 UTC
From: stephen zl1any <g_and_s_pearce@xtra.co.nz>
Message-ID: <3c7864d1$1@zfree.co.nz>
Source record: 46119

This kit is from Hands electronics and is for an hf transceiver
(6 or 20 w) ... has anyone any experience with it ... I would like
to find a review comparing the rx perfomance ... particularly with the
k2 ... also info on current consuption ...

it uses a dds drive vfo ...
and is a british design

Thanks

Stephen zl1any

http://www.zfree.co.nz

1578. Re: ARRL again affirms eQSL Cards -OK- for DXCC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 04:33:43 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u7gr9lknrdoe61@corp.supernews.com>
Source record: 46120
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

It's obviously SPAM since it's followed up to all sorts of groups that don't
care!

Somewhere (I think it was on the eQSL site) I saw where you had to have the
card mailed from eQSL (at a buck a card). Seemed to me exactly like the
sort of thing the League would dream up. Still, a buck is better than 3
IRCs.

In any case, you're right. If it were the case, there would be something on
the ARRL site. The last mention I could see was a year ago where the league
was working with a software vendor to provide a secure eQSLing service.

..

"Jim Higgins" <UseAddressInSig@pandora.orbl.org> wrote in message
news:qrjg7uogfsit684imr673e0i9ivdtcai3c@4ax.com...
>
> Can you point to anything on the ARRL website supporting this? I
> can't find word one, even in Members Only areas.
>
> Conflicting rumors say ARRL is placing added requirements on
> eQSLs that basically can't be met, possibly making the eQSL
> statement either untrue or grossly incomplete. My take on things
> is that eQSL is not telling the whole story involving all
> requirements.
>
> Also, and I feel stupid asking, but is there more to this
> Webmaster comment than this one line? I went to eQSL and can't
> find anything but this one sound bite. I think that's most
> unusual given how important this is to eQSL and DXCCers in
> general.
>
> --
> Jim Higgins, quasimodo AT yahoo DOT com
> icbm: 33.55.34N, 80.24.21W

1579. Re: ARRL again affirms eQSL Cards -OK- for DXCC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 04:42:09 UTC
From: Zoran Brlecic <WA7AA@attbi.com>
Message-ID: <3C786F20.455C62F0@attbi.com>
Source record: 46121
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

Jim Higgins wrote:

> >The ARRL has recently reaffirmed just one week after the original
> >historic announcement (08-Feb-2002) that eQSL Cards - ARE - accepted for
> >DXCC....this remark from the eQSL Webmaster found at this
> >
> >URL: http://www.eqsl.cc/qslcard/comments.cfm
> >"ARRL reaffirmed today that it will accept eQSLs that are mailed. AG or
> >not" (Webmaster)
> >15-Feb-2002
>
> Can you point to anything on the ARRL website supporting this? I
> can't find word one, even in Members Only areas.
>
> Conflicting rumors say ARRL is placing added requirements on
> eQSLs that basically can't be met, possibly making the eQSL
> statement either untrue or grossly incomplete. My take on things
> is that eQSL is not telling the whole story involving all
> requirements.
>
> Also, and I feel stupid asking, but is there more to this
> Webmaster comment than this one line? I went to eQSL and can't
> find anything but this one sound bite. I think that's most
> unusual given how important this is to eQSL and DXCCers in
> general.

What's the difference? Ain't nothin' "historical" about this announcement.
What the ARRL (may have) said is that they will accept the (e)QSLs that are
mailed. I fail to see the difference between a mailed QSL that had been
verified and printed by a QSL manager and a mailed eQSL that had been
verified and printed by the eQSL service.

73 .... Zoran WA7AA

1580. Re: ARRL again affirms eQSL Cards -OK- for DXCC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 05:03:43 UTC
From: "Dimmy's Lap Dog, Roger" <Dullard@BigMarie.com>
Message-ID: <a59s53dvo0@dosa.alt.net>
Source record: 46122
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

"Zoran Brlecic" <WA7AA@attbi.com> wrote in message
news:3C786F20.455C62F0@attbi.com...
> Jim Higgins wrote:
>
> > >The ARRL has recently reaffirmed just one week after the original
> > >historic announcement (08-Feb-2002) that eQSL Cards - ARE - accepted
for
> > >DXCC....this remark from the eQSL Webmaster found at this
> > >
> > >URL: http://www.eqsl.cc/qslcard/comments.cfm
> > >"ARRL reaffirmed today that it will accept eQSLs that are mailed. AG or
> > >not" (Webmaster)
> > >15-Feb-2002
> >
> > Can you point to anything on the ARRL website supporting this? I
> > can't find word one, even in Members Only areas.
> >
> > Conflicting rumors say ARRL is placing added requirements on
> > eQSLs that basically can't be met, possibly making the eQSL
> > statement either untrue or grossly incomplete. My take on things
> > is that eQSL is not telling the whole story involving all
> > requirements.
> >
> > Also, and I feel stupid asking, but is there more to this
> > Webmaster comment than this one line? I went to eQSL and can't
> > find anything but this one sound bite. I think that's most
> > unusual given how important this is to eQSL and DXCCers in
> > general.
>
> What's the difference? Ain't nothin' "historical" about this announcement.
> What the ARRL (may have) said is that they will accept the (e)QSLs that
are
> ***mailed***. I fail to see the difference between a mailed QSL that had
been
> verified and printed by a QSL manager and a mailed eQSL that had been
> verified and printed by the eQSL service.
>
>
> 73 .... Zoran WA7AA
>
Who cares? What is the ARRL anyway? A place to throw away your income?

1581. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 05:44:16 UTC
From: budgie <budgie@nowhere.cantech.net.au>
Message-ID: <3c787d8a.1985561@news.cantech.net.au>
Source record: 46092
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On 23 Feb 2002 10:13:21 -0800, mrmonett@yahoo.com (Mike Monett) wrote:

>Win Hill <whill@mediaone.net> wrote in message news:<3C77B901.9ED85A05@mediaone.net>...
>
>> It's at this point
>> that one looks at all the parts drawn on the sheet of paper and begins
>> to reconsider a simple IC regulator, with built-in thermal limiting.
>>
>> :-)
>> ___
>> Thanks, /.-.\
>> ((( ))
>> - Win \\\//
>> \\\
>> Winfield Hill //\\\
>> Rowland Institute for Science /// \\\
>> Cambridge, MA \/ \/
>
>Thanks for the excellent post, as usual. Now that we're back to a
>conventional ic regulator, how do you reduce the output noise:)

Only by compromising the internal reg loop characteristics :-(

1582. Re: WTB PYE 19" Rack cabinet (49 x 30.2 x 30.8 cm)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 05:48:40 UTC
From: budgie <budgie@nowhere.cantech.net.au>
Message-ID: <3c787e43.2171286@news.cantech.net.au>
Source record: 46093
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

On Sat, 23 Feb 2002 15:35:21 -0000, "Richard Daventry"
<newsgps_email@ntlworld.com> wrote:

>I need at least one more PYE 19" rack cabinet to match the 2 I already
>have. Size is 49cm wide, 30.2cm high and 30.8 cm deep (not measuring
>the back panel that sticks out another 7 cm). Says, "PYE
>Communications Equipment" at front of cabinet. Ventilation grill
>covers backhalf of top panel. Be particularly nice if any source is
>say 30 miles of Wakefield in West Yorkshire, (but perhaps unlikely).

I've got one in Perth - Australia that is. Certainly not within a
bull's roar of Yorkshire though :-(

>I suppose if you have a cabinet it may contain some older PYE/PHILIPS
>gear. I'd buy that if cheap (just to get the cabinet!!). Thanks. Rich.

Mine has an F60 base station in it. These are 6RU cabinets. Not much
use to you unless Onassis is your favourite uncle.

Peter VK6ZEG

1583. Adding high frequency roll-off to a set of stereo headphones

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 08:47:54 UTC
From: googlyelmo@earthlink.net
Message-ID: <3C78A8B7.D9AB7193@earthlink.net>
Source record: 46123

I want to cut the high-frequency response of a pair of mid-quality closed-cup stereo headphones I use for CW operating. I'd like to reduce the 'phones response above 8 KHz or so. I have used in the past true "communications" grade headphones with response cutting sharply off in the 7-10 KHz range, so I know what a tremendous benefit they can be for extended operating compared with phones made for listening to music with an 18-22 KHz upper cutoff. Much of the QRN, especially on 20 meters and above, is above 8 KHz. Getting rid of it is like dropping the weight of a backpack on an uphill hike.

I remember, dimly, reading somewhere that you can cut hi-freq. response by adding a capacitor across the two headphone leads. Am I correct in my recollection? If so, does the *type* of cap matter [i.e. ceramic, mylar, mica, etc.]? While I know that a bit of trial-and-error substitution probably will be involved here, what general value should I be looking at trying? Finally, exactly how should the cap be wired into the 'phone circuit? I think I remember reading that you simply solder one cap lead to each of the two phone wires, but please confirm/correct this. Thanks.

--
Will, KD7BFX
Seattle WA US
King County, Grid CN87tq
ITU Zone 6, CQ Zone 3
****
"The wireless telegraph is not difficult to understand.
The ordinary telegraph is like a very long cat.
You pull the tail in New York, and it meows in Los Angeles.
The wireless is the same, only without the cat."
- Albert Einstein
****

1584. HF transceiver miniature

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 09:26:09 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c78b099$0$9073@echo-01.iinet.net.au>
Source record: 46124

Dear Group

I have a hankering to build a transceiver covering some (3-4) of the HF bands with the following specs
I have done one version for 40/20/18 which worked ok but only had 1W out and is fairly fragile

Physically small/portable for walking/backpack
Surface mount components
Reasonable strong signal handling
CW/SSB modes (not AM/FM)
components reasonably easily available/cheap!
Current drain low on receive
3-5W out

I would be interested in ideas re
(1) Topology
I am not keen on doing fancy DDS/DSP type solutions for portable use (even if I could!)
A conventional single conversion superhet seems like the best idea with an IF of ?10.7 MHz, with filter type SSB generator using a balanced diode/filter setup (simple and carrier suppression is not critical)

(2) important components
Power amp transistors
I thought I would use TO-126 GP transistors with a Ft of about 150 MHz - these are $2 or so from Digikey
Anyone done an HF amp with these?
Mixer
I am not sure what is available in SM
A TUF-1 from minicircuits would give reasonable SS handling but would require more LO drive
IF amp
The venerable MC1350 still seems not a bad choice but can you get it in SM?
Is there a better choice with AGC?
Filter
I thought I would use a conventional monolithic filter as a simple solution.
LO
I will use a free running VFO with crystal osc mixer/BPF for each band. The VFO will be stabilized by my counter/PLL module

I would be grateful for any feedback

Richard

1585. Randy Rhea's HF Filter Design Book

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 09:39:30 UTC
From: Peter Bolch <peter.bolch@t-online.de>
Message-ID: <a5acp2nqc00$1@news.t-online.com>
Source record: 46125

Hi

I'm looking for a filter design book and think of buying Randy Rheas's book "HF Filter Design and Computer Simulation". Is this book useful if one does not have access to Rheas's Eagleware simulation program? So, can I build the filters described in the book without using the simulator?

Peter

1586. Artificial antenna pad for BC-receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 12:34:11 UTC
From: la8ak.xnd@online.no
Message-ID: <3c782af7.258995765@news.online.no>
Source record: 46126

The handbook for my old BC-receiver recommends an "artificial antenna"
to be connected in series with RF signal when sweeping the AM section,
somewhat difference between Long- and Medium-Waves.

The pad consists of 220pF, 390pF, 390 ohm resisistor and a 22uH coil.

Does it mean that this pad should be inserted when I use an external
antenna like an active antenna with 50 to 75 ohm impedance?

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

1587. Re: Tayloe detector as narrowband tunable filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 13:58:23 UTC
From: "Carl R. Stevenson" <wa6vse-shack@fast.net>
Message-ID: <3c78f1a3_2@news7.fast.net>
Source record: 46127

Sounds to me like something very similar to, if not
effectively the same as, the Weaver modulator and
a LOT of other prior art which builds on the Weaver
modulator ... basically, mix (or sample, which is the
same thing, effectively) down to baseband, lowpass
filter, then mix back up to some other frequency ...
if the phases are arranged properly, it's "single signal"
(ssb) and the "LO" for the 2nd mix (back up from
baseband) can be arranged to make the recovered
signal fall at audio, thus making it a demodulator.

Carl - wa6vse

"Richard Hosking" <zaprichardh@iinet.net.au(remove the zap)> wrote in
message news:3c75c2b7$0$3858@echo-01.iinet.net.au...
>
> "Michael Black" <blackm00@cam.org> wrote in message
> news:6447bcd3.0202211916.7b54f474@posting.google.com...
> > jim.bolinger@lintek.aeroflex.com (JLB) wrote in message
> news:<8d5ec8a2.0202211023.26bb9713@posting.google.com>...
> > >
> > One of the things that struck me when people first mentioned the "Tayloe
> > Mixer" here (and I found a schematic) was a certain resemblance to
> > the sort of circuitry used in Coherent CW. I probably noticed it
> > because looking at CCW schematics, there was something nagging me
> > at the back of my mind. There was something there that I thought could
> > be extended....
> >
> > I've always been curious about how Dan Tayloe came to the circuit.
> > What prompted him to give it a try? I've not seen anything about
> > this (though perhaps I missed it). Because seeing commutating filters
> > (the first issue of QST that I ever saw, April 1971, had such a filter)
> > and seeing those CCW schematics made me think, though I never tried
> > anything and there was only supposition (and vague enough that I can
> > no longer remember exactly what).
> >
> > In CCW, you have two data paths. In each, there is a mixer (or was
> > it a sample and hold?) being clocked at the input frequency, but
> > the clock to each channel is in quadrature.
>
> At this point the circuits are similar
>
> So you get a DC signal.
> > You then have two more mixers (or again was it a sample and hold?),
> > clocked at audio frequencies. Again, the clocking is in quadrature.

>
> This is equivalent to the second multiplexer except that in our circuit
the
> second clock converts from DC back up the signal frequency or to some IF.
In
> the CCW case the IF is at audio (but not 0Hz). Presumably this has the
> effect of shifting the CW carrier by an amount equivalent to the second
> clock
>
> >
> > It's been a while since I've looked at descriptions (and sadly, none
> > of my books have CCW in more than passing), but the first conversion
sure
> > looked like what you'd see in a phasing receiver. The second
conversion,
> > back to audio, seemed to do the job of the audio phase network, The
> > result was singal signal, but a narrow bandwidth.
> >
> > The best article in the ham magazines about commutating filters was in
Ham
> > Radio magazine, circa 1978, I think by Hank Olson.
>
> So it has all been done before...
>
> Unless I'm garbling
> > it, the cover features Wes Stewart's split-band voice processor. I
> > had always meant to dig up some of these articles and post a
bibliography,
> > because of the similarity between commutating filters, and CCW, and the
> > Tayloe Mixer.
> >
>
> Michael VE2BV
>
>
>
> Richard VK6BRO
>
>

1588. Re: Artificial antenna pad for BC-receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 14:06:00 UTC
From: "G. Skiffington" <skiffing@nbnet.nb.ca>
Message-ID: <3C792893.76E2@nbnet.nb.ca>
Source record: 46128

Hello Jan.....I'd have to say yes to your question on the assumption that the input to your BC receiver must be Hi-Z (What is the actual circuit for the pad?). Perhaps the manufacturer determined that the gain of the input RF amp or the 1st mixer operation might be influenced adversly by the Lo-Z source (a regen or TRF might have different/worse characteristics). Personally, I'd build the pad, then try it and compare feeding directly from your active antenna (with a look at the BC circuit first) - Of course if your active antenna is powered through the coaxial lead this might influence the decision :)

Gord - VE1AJF

1589. Re: HF transceiver miniature

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 17:05:12 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <8g6b5a.7ue.ln@my.linux.box>
Source record: 46129

In article <3c78b099$0$9073@echo-01.iinet.net.au>, Richard Hosking wrote:

> Physically small/portable for walking/backpack
> Surface mount components

OK for the young-un's with good eyesight.

> Reasonable strong signal handling

High-level mixer. diode ring, passive mosfet mixer (H-mode)
or high-level IC mixer (AD831).

> CW/SSB modes (not AM/FM)

That makes life a lot easier. How about a 6 or 8 pole
ladder filter made from 10 MHz CPU clock crystals?

> components reasonably easily available/cheap!

See above.

> Current drain low on receive

LCD display instead of LED.

> 3-5W out

CB PA transistor.

> A conventional single conversion superhet seems like the best idea with an
> IF of ?10.7 MHz, with filter type SSB generator using a balanced
> diode/filter setup (simple and carrier suppression is not critical)

http://homepage.eircom.net/~ei9gq/amp-mod.html works very well
for me.

> (2) important components
> Power amp transistors

CB PA transistors - I don't know what they use in modern CB's,
The 2SC1969, 2SC1307 and 2SC1945 were popular choices in
the old days.

> Mixer
> I am not sure what is available in SM
> A TUF-1 from minicircuits would give reasonable SS handling but would
> require more LO drive

Sounds good. Check www.analog.com for IC mixers.

> IF amp
> The venerable MC1350 still seems not a bad choice but can you get it in SM?

The MC1350 is still available. I believe they are no longer in
production so stocks will dry up eventually. I think there is a SM
version but I've never seen one.

> Is there a better choice with AGC?

I don't like to recommend something I haven't tried myself but
have a look at the AD603. I have heard good reports about them
from some of the folks on the UK homebrew net (3.727MHz).

The National Semiconductor CLC520 is another one worth
looking at.

I have data-sheets for both, if you can't find them on the
web.

> Filter
> I thought I would use a conventional monolithic filter as a simple solution.

If you can find one at a reasonable price. Check Aleksander Stare's
web-page for some homebrew ladder filter designs. There is a link
on my page. See below.

> LO
> I will use a free running VFO with crystal osc mixer/BPF for each band. The
> VFO will be stabilized by my counter/PLL module

Sounds good. If you are using the usual 5-5.5MHz approach, a
DDS might be a better approach, especially for mobile use.

> I would be grateful for any feedback
>
> Richard

And we look forward to hearing more about your progress.

VY 73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

1590. Re: Artificial antenna pad for BC-receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 17:21:41 UTC
From: la8ak.xnd@online.no
Message-ID: <3c78fb77.312379814@news.online.no>
Source record: 46130

On Sun, 24 Feb 2002 14:06:00 GMT, "G. Skiffington"
<skiffing@nbnet.nb.ca> wrote:

>Hello Jan.....I'd have to say yes to your question on the assumption
>that the input to your BC receiver must be Hi-Z (What is the actual
>circuit for the pad?). Perhaps the manufacturer determined that the
>gain of the input RF amp or the 1st mixer operation might be influenced
>adversly by the Lo-Z source (a regen or TRF might have different/worse
>characteristics). Personally, I'd build the pad, then try it and
>compare feeding directly from your active antenna (with a look at the BC
>circuit first) - Of course if your active antenna is powered through the
>coaxial lead this might influence the decision :)
>
>Gord - VE1AJF

thanks for your support. The active antenna is fed from 12V source in
the shack, but a divider is connected in between for signal to my
BC-receiver. It is lot of signal level so no problem to avoid thinking
about impedance matching. BBC Radio 4 on 198kHz has 500 V (-53dBm)
signal level in the evenings, and signal levels around 136KHz is far
above minimum receive level. Only problem is electrical noise, so a
balun (choke) of 9 turns of RG224 on ferrite toroid core is inserted
between the antenna and first divider.

I eventually made the pad with male and female BNC connectors on a
SUCO-box
IN-220pF--|-------22uH--|- OUT
| |
|-390pf--390R-| (read as dos txt)
artificial pad for BC radio, as recommended for Tandberg Huldra 9

Surrogate type is 200pF (150-300/550-1500kHz) LW/MW
or
400 ohm for 550-5000kHz

emailed you the circuit diagrams for antenna/mount/pad as small gif
files

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

1591. Re: Artificial antenna pad for BC-receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 17:30:26 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a5b92q$5vbjn$1@ID-124126.news.dfncis.de>
Source record: 46131

An artificial antenna is used when aligning the RF tuned circuits in a radio receiver. It is connected between the receiver input terminal and the signal generator.

Was most commonly used at the end of the assembly line in radio factories.

When a real antenna is used put the artificial antenna back on the shelf. It won't be needed again till the next realignment is due in 5 years time.

Old MW and LW valve receivers had a much higher input impedance than 50 or 75 ohms. Could be as high as 1000 ohms. But there was no standard impedance. It didn't matter.

The artificial antenna was designed to represent the average of all the millions of lengths of wire used as real antennas.

Which was any length between 1 metre hanging out the back of the set and 50 metres if the back garden was long enough.

****
Regards, Reg G4FGQ
Free Radio Modelling Software
Http://www.g4fgq.com
****
G. Skiffington <skiffing@nbnet.nb.ca> wrote in message
news:3C792893.76E2@nbnet.nb.ca...
> Hello Jan.....I'd have to say yes to your question on the assumption
> that the input to your BC receiver must be Hi-Z (What is the actual
> circuit for the pad?). Perhaps the manufacturer determined that the
> gain of the input RF amp or the 1st mixer operation might be influenced
> adversly by the Lo-Z source (a regen or TRF might have different/worse
> characteristics). Personally, I'd build the pad, then try it and
> compare feeding directly from your active antenna (with a look at the BC
> circuit first) - Of course if your active antenna is powered through the
> coaxial lead this might influence the decision :)
>
> Gord - VE1AJF

1592. Re: Artificial antenna pad for BC-receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 19:17:37 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a5beji$61uuh$1@ID-124126.news.dfncis.de>
Source record: 46132

From the circuit you posted it can be deduced the artificial antenna very crudely repesents an antenna wire about 100 feet = 30 metres long, with a poor ground.

Ground one end via a low impedance signal generator. Input impedance at the other end is intended to be typical of domestic radio receiving antennas, world-wide, in the 1930's and 40's. My father had a 25 metre wire throughout that period.

At VLF 220 pF is the capacitance of 100 feet of wire.

Above a few MHz 390 ohms is Zo of the wire considered as a transmission line.

The loss resistance slowly begins to increase around 150 KHz. Around 1 MHz the resistive component starts rising faster to account for a real antenna's radiation resistance.

Reg, G4FGQ

J M Noeding <la8ak.xnd@online.no> wrote in message
news:3c78fb77.312379814@news.online.no...
> On Sun, 24 Feb 2002 14:06:00 GMT, "G. Skiffington"
> <skiffing@nbnet.nb.ca> wrote:
>
> >Hello Jan.....I'd have to say yes to your question on the assumption
> >that the input to your BC receiver must be Hi-Z (What is the actual
> >circuit for the pad?). Perhaps the manufacturer determined that the
> >gain of the input RF amp or the 1st mixer operation might be influenced
> >adversly by the Lo-Z source (a regen or TRF might have different/worse
> >characteristics). Personally, I'd build the pad, then try it and
> >compare feeding directly from your active antenna (with a look at the BC
> >circuit first) - Of course if your active antenna is powered through the
> >coaxial lead this might influence the decision :)
> >
> >Gord - VE1AJF
>
> thanks for your support. The active antenna is fed from 12V source in
> the shack, but a divider is connected in between for signal to my
> BC-receiver. It is lot of signal level so no problem to avoid thinking
> about impedance matching. BBC Radio 4 on 198kHz has 500 V (-53dBm)
> signal level in the evenings, and signal levels around 136KHz is far
> above minimum receive level. Only problem is electrical noise, so a
> balun (choke) of 9 turns of RG224 on ferrite toroid core is inserted
> between the antenna and first divider.

>
> I eventually made the pad with male and female BNC connectors on a
> SUCO-box
> IN-220pF--|-------22uH--|- OUT
> | |
> |-390pf--390R-| (read as dos txt)
> artificial pad for BC radio, as recommended for Tandberg Huldra 9
>
> Surrogate type is 200pF (150-300/550-1500kHz) LW/MW
> or
> 400 ohm for 550-5000kHz
>
> emailed you the circuit diagrams for antenna/mount/pad as small gif
> files
>
> 73
> Jan-Martin
> LA8AK
> --
> remove ,xnd to reply

1593. Those MRF138's? How much can I seriously expect?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 19:28:58 UTC
From: Melissa in Colorado <melissa@NOTOSPAMdimensional.com>
Message-ID: <Xns91BF7EFAE624EmelissaNOSPAMdimensi@206.124.0.13>
Source record: 46060
Cross-posted to:
sci.electronics.equipment,aus.electronics,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

We were talking about these before here.
http://dimensional.com/~melissa/mrf138.htm

Some people are asking $75-125 each for them.

But we could use a new hard drive and some software for the house, so if I wanted to sell them fairly soon, how much could I reasonably expect to get for them? Maybe $50 each if someone takes the whole lot of them?

I've been told my fellow hams are too cheap when it comes to this kind of thing, but they're the ones most likely to build things with these, right?

--
- Melissa in Colorado KW0WW Liberty Loving American

1594. Re: ARRL again affirms eQSL Cards -OK- for DXCC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 19:29:16 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C794018.3D1A@pop.removethistomailme.net>
Source record: 46133
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

```
Charles Johnston wrote:
>
> The ARRL has recently reaffirmed just one week after the original
> historic announcement (08-Feb-2002) that eQSL Cards - ARE - accepted

Unless you guys are building your own eQSL servers from chips and
solder, there are better groups for this spam than r.r.a.h...

-- jm

------------------------------------------------------
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
------------------------------------------------------
```

1595. Help Rect/reg ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 19:37:40 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <u7ig8be3ongcc@corp.supernews.com>
Source record: 46135

I've got a John Deere 140 (20 yrs old but good) garden tractor, mower. It's a 12 volt system and the rectifier regulator module is shot. They want nealry $100 for it, too much in my opinion. It's in a die cast aluminum case sealed with potting compound. I've tried several solvents, some for a week with no luck. The alternator on the tractor puts out about 30 volts AC at full speed so I guess there's a diode bridge and a series regulator to dump any excess. In addition I've not had any luck in chasing down a cirduit diagram but have found that a similar device is used on some Japanese motorcycles. The have problems too and are expensive. I see some reasonable priced rectifiers on this site;
http://www.aceelectric.com/PDF/BulletP/99Bull/99May.pdf but I've not been able to find any regulators. Does anyone have a diagram of a unit that works well or can point me to where I can look for a diagram, regulator, both or other complete units that are reasonably priced..
tnx
hank wd5jfr

1596. Keying older amp with late equipment

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 20:07:52 UTC
From: accrider3@aol.comnojunque
Message-ID: <20020224150752.26907.00000489@mb-ma.aol.com>
Source record: 46136

Hi,
I just purchased a Kenwood TS-2000 and am wondering the best way to key an SB-200/220 with the transciever. My old rig was TS-830S and this wasn't an issue. Searches on the web have been inconclusive. I am wondering if solid state is the way to go or just KISS and use a low milliamp coil 12V relay. Any help would be appreciated.
73 de Dale
KG4KZG

1597. Re: Adding high frequency roll-off to a set of stereo headphones

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 20:13:54 UTC
From: k7itm@aol.com
Message-ID: <3200347.0202241213.2364d17f@posting.google.com>
Source record: 46137

You can indeed cut the HF response by loading with a capacitance, but
for it to work as you expect, you'll need to know the impedance levels
you are working with. You need to have a known source resistance, for
a start: since many amplifiers have a very low output resistance, you
should probably add some resistance in series between the amplifier
and the headphones. Then, assuming the headphones themselves are
reasonably resistive and something on the order of 32 ohms (fairly
common, I believe...but yours MAY be different), if you have used,
say, 10 ohms from the amplifier output, that gives you roughly 7.6
ohms, taking them in parallel. Pick the capacitance to give you the
rolloff you want: C = 1/(2*pi*f*7.6ohms) Because the rolloff will be
quite gradual, I'd be inclined to pick a cap that starts the rolloff
just above the CW freq you listen to. I'd personally go for about
1kHz...then C is about 20uF. I'd avoid trying to do that with
electrolytic caps, but you'll end up with some fairly large ceramic or
film caps doing it. (I'd get serious about the whole thing and build
an active filter with MUCH smaller parts...but then comes the chore of
powering it and all.) -- But for a 2kHz rolloff, it's only 10uF, and
if you used a larger series resistor, say 33 ohms, you get down (at
2kHz rolloff) to about 4.7uF, which is not too difficult.

Cheers,
Tom

googlyelmo@earthlink.net wrote in message news:<3C78A8B7.D9AB7193@earthlink.net>...
> I want to cut the high-frequency response of a pair of mid-quality
> closed-cup stereo headphones I use for CW operating. I'd like to reduce
> the 'phones response above 8 KHz or so. I have used in the past true
> "communications" grade headphones with response cutting sharply off in
> the 7-10 KHz range, so I know what a tremendous benefit they can be for
> extended operating compared with phones made for listening to music with
> an 18-22 KHz upper cutoff. Much of the QRN, especially on 20 meters and
> above, is above 8 KHz. Getting rid of it is like dropping the weight of
> a backpack on an uphill hike.
>
> I remember, dimly, reading somewhere that you can cut hi-freq. response
> by adding a capacitor across the two headphone leads. Am I correct in
> my recollection? If so, does the *type* of cap matter [i.e. ceramic,
> mylar, mica, etc.]? While I know that a bit of trial-and-error
> substitution probably will be involved here, what general value should I
> be looking at trying? Finally, exactly how should the cap be wired into
> the 'phone circuit? I think I remember reading that you simply solder
> one cap lead to each of the two phone wires, but please confirm/correct
> this. Thanks.
>

> --
> Will, KD7BFX
> Seattle WA US
> King County, Grid CN87tq
> ITU Zone 6, CQ Zone 3
> **********
> "The wireless telegraph is not difficult to understand.
> The ordinary telegraph is like a very long cat.
> You pull the tail in New York, and it meows in Los Angeles.
> The wireless is the same, only without the cat."
> - Albert Einstein
> **********

1598. HB DX-pediton

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 20:32:12 UTC
From: n2cqr@clix.pt
Message-ID: <3c794da9.37594208@news.clix.pt>
Source record: 46134

I'm back in the Azores after 10 days in the Dominican Republic. I was able
to get on the air (on 17 meters) with my Homebrew QRP DSB rig.

The transmitter is modeled (very roughly) on the Wee Willy rig. For the RX
it uses three NE-602s (RF AMP, Mixer and first AF) and one LM386. (This RX
arrangement works very well -- this is the nicest DC receiver I've ever
used.) TX has an LM386 as the microphone amp to an NE-602 mixer to three
stages of RF amplification. Oscillator is a VXO that gives about 20 kHz of
coverage.

I powered the rig with 8 D Cell batteries held together with duct tape.
Worked very well and allows the traveler to avoid carrying heavy and
possibly leaky batteries. Headphones were from an old Sony walkman.
Microphone was the size of my thumbnail and came from the an old Sony tape
recorder.

The antenna was a dipole that was strung a bit too close to the ground. And
I found that the < 1watt power out was a bit too QRPish for phone. I think
I will have to get some more drive to the final to bring it up to at least 5
watts or so.

In spite of these shortcomings I was able to make ten contacts: KG2PD,
W2HNV, W5GJ, KA9EES and KE4UYP. DX stations: LA6IIP/P (who I've worked
several times from the Azores), J3/W4QDC, PA1RJ (who reported "beautiful
copy"!) IK1TXM and C6ALC.

I had a lot of fun with this operation. It was kind of cool to do it with
an HB rig.

73 de Bill CU2JL (aka N2CQR)
Sao Miguel Island

The Azores, Portugal
37.7 N 25.6 W
http://planeta.clix.pt/n2cqr
73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 15.7 W
http://planeta.clix.pt/n2cqr

1599. Re: ARRL again affirms eQSL Cards -OK- for DXCC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 21:07:02 UTC
From: Zoran Brlecic <WA7AA@attbi.com>
Message-ID: <3C7955F6.F900BD1F@attbi.com>
Source record: 46138
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

"Dimmy's Lap Dog, Roger" wrote:

> Who cares? What is the ARRL anyway? A place to throw away your income?

Right... Don't join. When they come to take away your frequencies, your operating privileges and eventually your entire hobby, just lock yourself with a couple of buddies in a shack in Montana and make an armed stand-off against the feds.

A typical CB mentality if I've ever seen one.

1600. Re: ARRL again affirms eQSL Cards -OK- for DXCC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 21:23:43 UTC
From: KC8JBO <kc8jbo@alt.net>
Message-ID: <a5bnug$l1f$0@dosa.alt.net>
Source record: 46140
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

"Zoran Brlecic" <WA7AA@attbi.com> wrote in message
news:3C7955F6.F900BD1F@attbi.com...
> "Dimmy's Lap Dog, Roger" wrote:
>
> > Who cares? What is the ARRL anyway? A place to throw away your income?
>
> Right... Don't join. When they come to take away your frequencies, your
> operating privileges and eventually your entire hobby, just lock yourself
with a
> couple of buddies in a shack in Montana and make an armed stand-off
against the
> feds.
>
> A typical CB mentality if I've ever seen one.

He couldn't afford the $39, it would cut into his crack-cocaine money.

1601. FS: RCA HB-3 TUBE HANDBOOK, ANTIQUE-'43

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 21:34:32 UTC
From: rlucch2098@aol.com
Message-ID: <20020224163432.12741.00000547@mb-bj.aol.com>
Source record: 46139

Hi Guys;
Now this is an Antique Handbook. Its the RCA Tube Handbook, but the year escapes me, there are dates of 1943, 1938 & 46 printed here & there in the book. The leather-ette cover is marked HB-3, Vol. 1-2 but I have no idea if this is Correct because its very old! I do know that it measures 5"w x 7-1/2"h x 2"thick. Seems to cover all aspects of tubes ranging from RCA 00-A detector to 117Z-6-GT/G. Many receiving, Audio amp., etc. There are basing diagrams & much more info.
A great collector book from the RCA co. in NJ.
Here are a few pics, really is in nice shape for its age!>>

http://www.baltimorepress.com/~wa2rqy/rcatubebook-1.jpg

http://www.baltimorepress.com/~wa2rqy/rcatubebook-2.jpg
Price is $27ppd Conus!
Thanks es 73....Rich WA2RQY (1961)
WA2RQY's "confusion Radio" Web-Page
Http://members.aol.com/rlucch2098/index.html
RLUCCH2098@aol.com
"Keep those heaters on"

1602. Re: ARRL again affirms eQSL Cards -OK- for DXCC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 22:52:49 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u7irmv2qkse585@corp.supernews.com>
Source record: 46141
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

"Zoran Brlecic" <WA7AA@attbi.com> wrote in message
news:3C7955F6.F900BD1F@attbi.com...

> Right... Don't join. When they come to take away your frequencies

This month's Scientific American had an article on using power lines for LAN connections. When I saw that they had broken the 4-20MHz spectrum up into 84 wideband channels it really raised my eyebrows. Sounded like a great opportunity to QRM almost all the HF bands. And are we really going to get on our neighbors case because their computer is keeping us off 40 though 15?

But then I read a little further. They blocked out the ham bands from their frequency plan. Seems they knew the League would be all over them like a cheap suit. Looks like they learned a lesson from the RFID crowd. Not clear who is going to win that one yet, but the League has kept them from wrecking 440 for several years now.

..

1603. Re: Artificial antenna pad for BC-receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 23:00:03 UTC
From: la8ak.xnd@online.no
Message-ID: <3c795194.334428380@news.online.no>
Source record: 46142

On Sun, 24 Feb 2002 17:30:26 -0000, "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>An artificial antenna is used when aligning the RF tuned circuits in a radio
>receiver. It is connected between the receiver input terminal and the
>signal generator.
>
>Was most commonly used at the end of the assembly line in radio factories.
>
>When a real antenna is used put the artificial antenna back on the shelf. It
>won't be needed again till the next realignment is due in 5 years time.
>
>Old MW and LW valve receivers had a much higher input impedance than 50 or
>75 ohms. Could be as high as 1000 ohms. But there was no standard
>impedance. It didn't matter.
>
>The artificial antenna was designed to represent the average of all the
>millions of lengths of wire used as real antennas.
>
>Which was any length between 1 metre hanging out the back of the set and 50
>metres if the back garden was long enough.
>---
>****************************
>Regards, Reg G4FGQ
>Free Radio Modelling Software
>Http://www.g4fgq.com
>****************************

Thanks for interesting information in another poster/thread

...and when I wish to listen to Radio 4 or other stations on LW/MW do
you suggest that I feed the receiver with 75 ohm from the active
antenna? It is no problem with signal strength, Radio 4 on 198kHz is
-50dBm, should work well with less than -70dBm, so the question is
"will 75 ohm upset the selectivity of the receiver?" For this
particular receiver, it is only ECH81 with one tuned RF circuit, the
antenna is coupled via a link on the respective RF-coils, it might
indicate that optimum antenna impedance is non-reactive. Image
rejection is cllaimed to be 80dB on LW and 50 on MW.

I may use this active aerial for shortwave, but suppose other aerials
would be better, it was primarily meant for 136kHz and BC-reception is
just a free addition.

73
Jan-Martin

LA8AK (ex G5BFV)
--
remove ,xnd to reply

1604. Re: Help Rect/reg ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 23:31:00 UTC
From: Mark Hall <vze2mhvc@bellatlantic.net>
Message-ID: <3C797692.C0CE2339@bellatlantic.net>
Source record: 46143

You should be able to fix it using a car regulator. Just pick one that is a module like yours and wire it in. Nothing magic about 12V alternator systems. I doubt John Deere invented their own Alternator or Regulator module.. Likely some mass produced unit.

mark

Henry Kolesnik wrote:

> I've got a John Deere 140 (20 yrs old but good) garden tractor, mower. It's
> a 12 volt system and the rectifier regulator module is shot. They want
> nealry $100 for it, too much in my opinion. It's in a die cast aluminum
> case sealed with potting compound. I've tried several solvents, some for a
> week with no luck. The alternator on the tractor puts out about 30 volts AC
> at full speed so I guess there's a diode bridge and a series regulator to
> dump any excess. In addition I've not had any luck in chasing down a
> cirduit diagram but have found that a similar device is used on some
> Japanese motorcycles. The have problems too and are expensive. I see some
> reasonable priced rectifiers on this site;
> http://www.aceelectric.com/PDF/BulletP/99Bull/99May.pdf but I've not been
> able to find any regulators. Does anyone have a diagram of a unit that
> works well or can point me to where I can look for a diagram, regulator,
> both or other complete units that are reasonably priced..
> tnx
> hank wd5jfr

1605. Re: Artificial antenna pad for BC-receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 23:40:16 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a5bu0v$5s66t$1@ID-124126.news.dfncis.de>
Source record: 46144

Jan-martin, I think you have got the point - the artificial antenna had nothing to do with what the receiver input impedance is. Put it on the shelf and forget it.

If you plug in another antenna, (active or not active is not relevant) and the signal strength is good enough and there's no adjacent channel interference then that's fine.

Have a look at the circuit diagram. The antenna is probably tapped into or inductively coupled to a front-end tuned circuit. Rx input impedance will depend very greatly on how the preset trimmer capacitor has been set.

If the Rx was originally tuned-up using the artificial antenna then by connecting a 50/75 ohm antenna the front-end tuned circuit will be detuned a small amount.

So connect your 50-ohm antenna to the receiver and tune up the trimmer capacitor across the input tuned circuit for maximum volume while you are listening to Droitwich.

Then do similar on the mediumwave band with the MW trimmer capacitor. Any improvement ?

It is always best to tune up the front end with the same antenna the receiver is normally used with. It's louder and adjacent channel interference is minimised.

Reg, G4FGQ

J M Noeding <la8ak.xnd@online.no> wrote in message
news:3c795194.334428380@news.online.no...
> On Sun, 24 Feb 2002 17:30:26 -0000, "Reg Edwards"
> <g4fgq.regp@btinternet.com> wrote:
>
> >An artificial antenna is used when aligning the RF tuned circuits in a
radio
> >receiver. It is connected between the receiver input terminal and the
> >signal generator.
> >
> >Was most commonly used at the end of the assembly line in radio
factories.
> >
> >When a real antenna is used put the artificial antenna back on the shelf.
It
> >won't be needed again till the next realignment is due in 5 years time.
> >
> >Old MW and LW valve receivers had a much higher input impedance than 50

or
> >75 ohms. Could be as high as 1000 ohms. But there was no standard
> >impedance. It didn't matter.
> >
> >The artificial antenna was designed to represent the average of all the
> >millions of lengths of wire used as real antennas.
> >
> >Which was any length between 1 metre hanging out the back of the set and
50
> >metres if the back garden was long enough.
> >---
> >**********
> >Regards, Reg G4FGQ
> >Free Radio Modelling Software
> >Http://www.g4fgq.com
> >**********
>
> Thanks for interesting information in another poster/thread
>
> ...and when I wish to listen to Radio 4 or other stations on LW/MW do
> you suggest that I feed the receiver with 75 ohm from the active
> antenna? It is no problem with signal strength, Radio 4 on 198kHz is
> -50dBm, should work well with less than -70dBm, so the question is
> "will 75 ohm upset the selectivity of the receiver?" For this
> particular receiver, it is only ECH81 with one tuned RF circuit, the
> antenna is coupled via a link on the respective RF-coils, it might
> indicate that optimum antenna impedance is non-reactive. Image
> rejection is cllaimed to be 80dB on LW and 50 on MW.
>
> I may use this active aerial for shortwave, but suppose other aerials
> would be better, it was primarily meant for 136kHz and BC-reception is
> just a free addition.
>
> 73
> Jan-Martin
> LA8AK (ex G5BFV)
> --
> remove ,xnd to reply

1606. Re: Help Rect/reg ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-24 23:50:56 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <U6fe8.2075$eT4.190215@news6-win.server.ntlworld.com>
Source record: 46145

> The alternator on the tractor puts out about 30 volts AC
> at full speed so I guess there's a diode bridge and a series regulator to
> dump any excess. In addition I've not had any luck in chasing down a
> cirduit diagram but have found that a similar device is used on some
> Japanese motorcycles. The have problems too and are expensive. I see
some
> reasonable priced rectifiers on this site;
> http://www.aceelectric.com/PDF/BulletP/99Bull/99May.pdf but I've not been
> able to find any regulators. Does anyone have a diagram of a unit that
> works well or can point me to where I can look for a diagram, regulator,
> both or other complete units that are reasonably priced..
==========
Could is possibly be a SHUNT regulator ? I am intrigued.

Frank gm0csz.kn6wh@ntlworld.com

1607. FS: 100's of TUBES, $.35 each

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 00:04:47 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <zcfe8.3996$2v6.374292@news1.west.cox.net>
Source record: 46146
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Please email w6krc@arrl.net for list.

1608. Re: ARRL again affirms eQSL Cards -OK- for DXCC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 00:24:43 UTC
From: Ronald Oberloh <wa0kds@yahoo.com>
Message-ID: <3C79844B.6A0A10AD@yahoo.com>
Source record: 46047
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

So without the ARRL what other organization can I job that will do anything for HAM radio?????????????

1609. Re: Keying older amp with late equipment

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 00:25:54 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <Pxfe8.11432$Ui1.172688520@news.inreach.com>
Source record: 46048

Dale:

My TS-50 has no problem keying amps like the Collins 30L-1 so I am surprized that the TS-2000 has no provision for keying external amps. What does the manual say?

Roger K6XQ

1610. Re: Keying older amp with late equipment

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 00:31:54 UTC
From: Steve Lyon <Steve_Lyon@prodigy.net>
Message-ID: <_Bfe8.12354$Mk7.1612275834@newssvr17.news.prodigy.com>
Source record: 46049

"A ccrider3" <accrider3@aol.comnojunque> wrote in message
news:20020224150752.26907.00000489@mb-ma.aol.com...
> Hi,
> I just purchased a Kenwood TS-2000 and am wondering the best way to key an
> SB-200/220 with the transciever. My old rig was TS-830S and this wasn't an
> issue. Searches on the web have been inconclusive. I am wondering if
solid
> state is the way to go or just KISS and use a low milliamp coil 12V relay.
Any
> help would be appreciated.
> 73 de Dale
> KG4KZG
>
I have had good results using the SK-200 soft key module with my SB-200.

http://www.harbachelectronics.com/

Steve
WB6RIB

1611. Re: Artificial antenna pad for BC-receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 00:46:27 UTC
From: "Sverre Holm (LA3ZA)" <la3za@qsl.net>
Message-ID: <DPfe8.11412$HL2.272080@news2.ulv.nextra.no>
Source record: 46050

I had this reply when I inquired about the stanard RMA dummy antenna. It seems to me that this is something similar to the artificial antenna pad that you are describing:

Sverre - LA3ZA
-----Original Message-----

From: Crazy George [mailto:munschNO@attglobal.net.SPAM]
Sent: 10. mai 2001 19:59
Subject: Re: standard RMA dummy antenna

Sverre:

Back before everything tried to be standardized to 50 ohms, the manufacturers agreed on the dummy antenna you describe, so that sensitivity measurements could be standardized, and receiver performance directly compared. I think it was supposed to be equivalent to a single wire antenna made of 60 or 100 feet (20 to 33 meters) of wire about 20 feet (6 meters) above the ground.

--
Crazy George

Sverre Holm wrote in message news:Pine.GSO.4.21.0105101300020.678-100000@granvin.ifi.uio.no...

My Hallicrafters S40A Service Bulletin (about 1950) specifies a standard RMA dummy antenna to be used when aligning the receiver. It says that it "consists of a 200 mmf. condenser in series with a 20 uh r-f choke which is shunted by a 400 mmf condenser in series with a 400 ohms carbon resistor."

What exactly is the reason for using this dummy antenna, and what kind of characteristics does it try to emulate?

Sverre Holm,

1612. Microphone preamp for Icom ic-725

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 00:52:56 UTC
From: gil <gilpi@mindspring.com>
Message-ID: <a5c1sv$3u0$1@slb4.atl.mindspring.net>
Source record: 46051

Im looking to build a simple Microphone preamp to drive the ic-725,
any schematics or ideas I can get help on?

Thanks

Gil N2WJW

1613. Re: Help Rect/reg ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 01:13:58 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <qdge8.181874$Aw2.13978749@bin7.nnrp.aus1.giganews.com>
Source record: 46052

Nope, no shunt regulators. The usual is to control the field current via a feedback circuit and let the alternator act as its own current limiter. No active components are really necessary but it's more elegant to use them.

The older automobiles used voltage sensitive relays to control field current.

You can test the alternator with a variable resistor in series with the field coil and see how much the output is as you vary it. The diodes in the three phase rectifier act to prevent discharge of the battery into the alternator although when they get old they may start to leak and slowly drain the battery. The diodes are the parts that most usually fail.

1614. Re: ARRL again affirms eQSL Cards -OK- for DXCC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 01:20:32 UTC
From: Zoran Brlecic <WA7AA@attbi.com>
Message-ID: <3C799147.BBB0B3FF@attbi.com>
Source record: 46053
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

Ronald Oberloh wrote:

> So without the ARRL what other organization can I job that will do anything for HAM
> radio??
??
??
??
??/
>
> I really want to know.....

That's my point!!!

1615. Re: Help Rect/reg ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 01:39:12 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <u7j5ebdlofhj60@corp.supernews.com>
Source record: 46054

the stator has 2 leads that i assume go to a bridge input in the rect/reg...
there is one lead that goes to the battery...
no feedback!
the rotor is the flywheel with some permanent magnets imbedded..
like i mentioned earlier the output is about 30 vac at max rpm..
tnx for all the suggestions..
hank
"Bob" <balbert@cnmnetwork.com> wrote in message
news:qdge8.181874$Aw2.13978749@bin7.nnrp.aus1.giganews.com...
> Nope, no shunt regulators. The usual is to control the field current via
a
> feedback circuit and let the alternator act as its own current limiter.
No
> active components are really necessary but it's more elegant to use them.
>
> The older automobiles used voltage sensitive relays to control field
> current.
>
> You can test the alternator with a variable resistor in series with the
> field coil and see how much the output is as you vary it. The diodes in
the
> three phase rectifier act to prevent discharge of the battery into the
> alternator although when they get old they may start to leak and slowly
> drain the battery. The diodes are the parts that most usually fail.
>
>

1616. Re: Microphone preamp for Icom ic-725

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 01:54:52 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <3c79992f_2@newsa.ev1.net>
Source record: 46056

Look on my web site, I have a few circuits there.
www.qsl.net/kk5dr/

73 de Matt KK5DR

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"gil" <gilpi@mindspring.com> wrote in message
news:a5c1sv$3u0$1@slb4.atl.mindspring.net...
> Im looking to build a simple Microphone preamp to drive the ic-725,
> any schematics or ideas I can get help on?
>
> Thanks
>
> Gil N2WJW
>
>

1617. First Timer Project Suggestions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 02:29:41 UTC
From: KC8SSG <kc8ssg@qsl.net>
Message-ID: <pkhe8.137$6f1.1149@news>
Source record: 46055
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

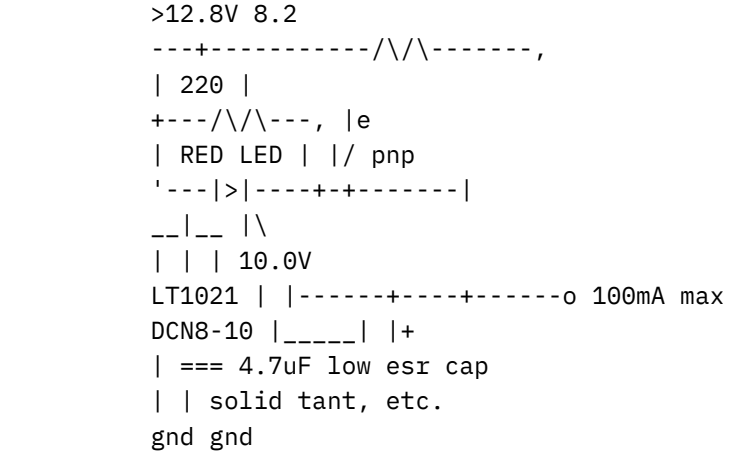
I am wanting to do a receiver project. I'm thinking 10 meters. I have very little experience building electronics. But wanting to learn. any suggestions or links would be great!
Thanks
Rob
KC8SSG
crandall@ee.net

1618. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 02:30:52 UTC
From: Win Hill <whill@mediaone.net>
Message-ID: <3C79A039.A19A1815@mediaone.net>
Source record: 46057
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Miles wrote:
>
> Mike Monett wrote:
>>
>> Thanks for the excellent post, as usual. Now that we're back to a
>> conventional ic regulator, how do you reduce the output noise:)
>
> And, more to the point, why doesn't anyone sell a low-noise
> 3-terminal regulator? The old-school LM723 is not a very elegant
> solution considering the number of pins and amount of support
> circuitry that chip requires.... yet it still seems to be the
> only game in town for low-noise regulation.

One solution is to use a precision voltage reference IC as the regulator. For example, an LT1021 in the DCN8-10 version costs only $3.17 (singles), yet has 1% initial accuracy and less than 4uV p-p of 0.1 to 10Hz noise, and 2.2uV rms in a 10Hz to 10kHz bandwidth. It also specs 105dB of ripple rejection, so 0.5V of input ripple should create under 2.5uV at the output.



The LED lights up as the circuit current limits. In one variant, a darlington PNP power transistor with a green LED and 0.25 ohms of emitter current-limiting resistance would allow up to 2A out.

Linear Technology points out that to achieve a low 1/f noise level it's necessary to place a plastic-foam insulator around the LT1021 and lead wiring to prevent air-current turbulence with associated thermoelectric voltage changes. They suggest up to 10X more noise without an air shield, and show a graph with 30uV p-p excursions in

a few minutes - were they doing some hand waving? :-)

The noise compares to 86uV for an LM723 in its usual configuration.
However the venerable 723 with an RC filter after the zener stage is
claimed by NSC to achieve 2.5uV rms of noise (100Hz to 10kHz), which
the LT1021 only slightly betters, although without the help of an RC
filter! The LT1021 has less 1/f noise and must do better overall;
it's one of the best-rated parts in AoE's table 6.7, page 336.

Hmm, I wonder, do typical 723 chips ever exhibit popcorn noise?

Thanks, /.-.\
((( ))
- Win \\\//
\\\
Winfield Hill //\\\
Rowland Institute for Science /// \\\
Cambridge, MA \/ \/

1619. Re: First Timer Project Suggestions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 03:23:01 UTC
From: ik7565@erols.com
Message-ID: <3C79AE15.ED6E0AF8@erols.com>
Source record: 46058
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

10m could be a tough project if your experience is limited. Try a
NorCal40A or follow Doug's advice at http://www.qsl.net/westfla/kits/

73 de Ian
N8IK

KC8SSG wrote:
>
> I am wanting to do a receiver project. I'm thinking 10 meters. I have very
> little experience building electronics. But wanting to learn. any
> suggestions or links would be great!
> Thanks
> Rob
> KC8SSG
> crandall@ee.net

1620. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 04:07:44 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0202242007.394eabbf@posting.google.com>
Source record: 46059
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Miles <jmiles@pop.removethistomailme.net> wrote in message news:<3C78095E.21FD@pop.removethistomailme.net>...

> And, more to the point, why doesn't anyone sell a low-noise 3-terminal
> regulator? The old-school LM723 is not a very elegant solution
> considering the number of pins and amount of support circuitry that chip
> requires.... yet it still seems to be the only game in town for
> low-noise regulation.
>
> -- jm

Hi John,

I just Googled and got 61,000 hits on low noise regulators. I checked the majors - Motorola, NatSem, Philips, etc.

It seems they are all on the bandwagon for low noise LDO regulators. Typical specs are 30uV to 40uV up to 100KHz, and 150mA to 250Ma load current. All the ones I checked use a PNP to drive the output, which is what you'd expect for a LDO. Motorola and Philips don't need an output cap.

The biggest problem is they are all low voltage - 1.5V to 5.0V, and there is no access to the divider to change the output. So it looks like the 723 is still the best solution for higher voltages. Fortunately it still seems to be in volume production, at least at NatSem.

Now, about those filters. Here's the shape I'd like to see:

http://www.iscointl.com/aboutoverview.html

It's the red curve:)

Best Regards,

Mike Monett

1621. Re: ARRL again affirms eQSL Cards -OK- for DXCC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 04:53:28 UTC
From: Ronald Oberloh <wa0kds@yahoo.com>
Message-ID: <3C79C348.21DBEC0D@yahoo.com>
Source record: 46061
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

No you were running the ARRL down.....

Zoran Brlecic wrote:

> Ronald Oberloh wrote:
>
> > So without the ARRL what other organization can I job that will do anything for HAM
> > radio???
??
??
??
??/
> >
> > I really want to know.....
>
> That's my point!!!
!!
> !!
!!
!!
!!
!!
!!!!!!!!!!!!!!!!

1622. Re: First Timer Project Suggestions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 05:17:24 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <4Pje8.11435$qN1.174679136@news.inreach.com>
Source record: 46062
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Rob:

I would not choose 10 meters either. The band is dead a substantial part of the time so you won't know if your receiver project is working or not. I would also suggest a 40 meter receiver because it will pull in signals day and night.

Roger K6XQ

1623. Re: Those MRF138's? How much can I seriously expect?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 05:38:40 UTC
From: Bob Headrick <bobh@proaxis.com>
Message-ID: <3c79cdf8_1@news.nwlink.com>
Source record: 46063
Cross-posted to:
sci.electronics.equipment,aus.electronics,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

"Melissa in Colorado" <melissa@NOTOSPAMdimensional.com> wrote in message
news:Xns91BF7EFAE624EmelissaNOSPAMdimensi@206.124.0.13...
> We were talking about these before here.
> http://dimensional.com/~melissa/mrf138.htm
>
> Some people are asking $75-125 each for them.
>
> But we could use a new hard drive and some software for the house, so if I
> wanted to sell them fairly soon, how much could I reasonably expect to get
> for them? Maybe $50 each if someone takes the whole lot of them?

Based on your eBay experience I would expect around $5 each....
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1333352146
The 28V operation is a problem for most common ham applications. They can
be used, but they would not be the first choice for many applications.

- 73 Bob W7OV

1624. Re: First Timer Project Suggestions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 06:28:29 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0202242228.50fc4df1@posting.google.com>
Source record: 46064
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

"KC8SSG" <kc8ssg@qsl.net> wrote in message news:<pkhe8.137$6f1.1149@news>...
> I am wanting to do a receiver project. I'm thinking 10 meters. I have very
> little experience building electronics. But wanting to learn. any
> suggestions or links would be great!
> Thanks
> Rob
> KC8SSG
> crandall@ee.net

How do you mean "first timer"? If you haven't built anything, you might want to start even simpler. Start by building simple little bits of test equipment, things that will be useful but are only one stage each. This will give you a chance to do some soldering. You won't have to worry about damaging expensive parts, and for most of these, you can get parts off scrap circuit boards and if you mess something up, just start again without having wasted money.

You'll need some sort of power supply, and they are relatively straightforward to build.

One of the most useful pieces of "test equipment" has always been an audio amplifier. Nothing complicated, just a 386 IC (like you'll find in a lot of receiver designs) in a box with it's own power supply and speaker. Then, whenever you need to check some sort of audio signal, you have an amplifier around to listen to it.

Build up some crystal oscillators. Way back when I started, the first few projects that I tried didn't work (and I never did get them to work) despite copying the parts list from the magazine and going down to the parts store. The first thing that did work, was a really simple crystal oscillator, using a transistor that I took off a scrap circuit board. Have some sort of socket, so you can plug in various crystals. If you happen to have the right frequencies, you can use them for testing a later receiver (ie use it as a really cheap signal generator).

Some sort of audio oscillator is always useful, for testing audio circuitry. I've tended to breadboard something when I've needed this sort of thing, but a few years back I finally built up a genuine "signal injector". The ARRL Handbook has a circuit or two. It's just an audio frequency multivibrator; since it's full of harmonics, you can use it for finding faulty stages in radio frequency circuits.

After that, or instead of that, you might want to build up a receiver putting each stage on a separate piece of circuit board. The audio amplifier here, the mixer there, etc. This again has the advantage that you can have some sort of results after just a bit of effort, and if you mess up a stage, you won't damage the whole thing. Years ago, there was a series of articles in QST along these lines. Build up the audio amplifier, then add a mixer stage, and an oscillator. There, you have a direct conversion receiver. Add a mixer and another oscillator, and you have a simple superheterodyne receiver. Add a filter, and the receiver gets better.

One of the greatest things invented has to be copper-clad circuit board. Yes, you can lay out a pattern and etch it, but it's really useful for breadboarding purposes. It gives you an easy to cut building material, and the copper, which is easy to solder to, gives you a really good ground surface. Whenever something is connected to ground, you solder to the circuit board, and then the rest of the circuitry sits above that. It is really easy to change if you make a mistake, or want to change something, or start all over.

Michael VE2BVW

1625. Re: ARRL again affirms eQSL Cards -OK- for DXCC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 07:19:56 UTC
From: Zoran Brlecic <WA7AA@attbi.com>
Message-ID: <3C79E599.1E19896C@attbi.com>
Source record: 46065
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

Ronald Oberloh wrote:

> No you were running the ARRL down.....
>
> Zoran Brlecic wrote:
>
> > Ronald Oberloh wrote:
> >
> > > So without the ARRL what other organization can I job that will do anything for HAM
> > > radio???
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??/
> > >
> > > I really want to know.....
> >
> > That's my point!!
!!
> > !!
!

1626. Re: First Timer Project Suggestions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 09:21:52 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c7a01ef.857544@news.freeserve.net>
Source record: 46067
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Mon, 25 Feb 2002 09:47:06 GMT, n2cqr@clix.pt (Bill Meara) wrote:

>Rob: Build a little CW transmitter first. Make some QSO's with it.
>Do a Web Search for "Michigan Mighty Mite."
>
Yer Tez,

http://cs.okanagan.bc.ca/ve7ouc/eng/kc6wdk-mirror/transmitter.html

1627. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 09:31:23 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <diuj7uo0m642mii5pqqj3c14g8ocg7ekub@4ax.com>
Source record: 46068
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On 24 Feb 2002 20:07:44 -0800, mrmonett@yahoo.com (Mike Monett) wrote:

>The biggest problem is they are all low voltage - 1.5V to 5.0V, and
>there is no access to the divider to change the output. So it looks
>like the 723 is still the best solution for higher voltages.

How about putting two LDOs in "series" ?

The lower 5 V regulator would get the full input voltage (say +12V)
and generate +5 V and all output current going into a load resistor.
The upper regulator would be connected between the full 12 V DC input
and the +5V output from the first regulator, thus, voltages up to 10 V
could be generated.

The resistor at the lower +5 V regulator from output to ground must be
capable of sinking the worst case idle current from the upper
regulator, usually a few mA, so a 0.1-1k load resistor should be
sufficient.

Since the noises generated by these regulators have a random phase,
only the noise power is summed, thus, the combined noise voltage is
only 1.41 times the noise voltage for a single unit in a 5+5 V combo.

Paul OH3LWR

1628. Re: First Timer Project Suggestions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 09:47:06 UTC
From: n2cqr@clix.pt
Message-ID: <3c7a0716.2153206@news.clix.pt>
Source record: 46066
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Mon, 25 Feb 2002 02:29:41 GMT, "KC8SSG" <kc8ssg@qsl.net> wrote:

>I am wanting to do a receiver project. I'm thinking 10 meters. I have very
>little experience building electronics. But wanting to learn. any
>suggestions or links would be great!
>Thanks
>Rob
>KC8SSG
>crandall@ee.net
>
>
Rob: Build a little CW transmitter first. Make some QSO's with it.
Do a Web Search for "Michigan Mighty Mite."

Then maybe a direct conversion receiver. But not for 10. Easier to
start out with something on 75 or 40.

Start building a tech library. And a stockpile of parts. And get a
simple multimeter. Arrange a good workspace.

Good luck! Have fun! Start out slow and don't take on anything too
complicated at first. Don't be afraid to ask for help when you get
stuck. We all get stuck from time to time.

73 Bill CU2JL
73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 15.7 W
http://planeta.clix.pt/n2cqr

1629. Re: Those MRF138's? How much can I seriously expect?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 10:51:44 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <005d5a.emf.ln@my.linux.box>
Source record: 46077
Cross-posted to:
sci.electronics.equipment,aus.electronics,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

In article <Xns91BF7EFAE624EmelissaNOSPAMdimensi@206.124.0.13>, Melissa in Colorado wrote:

> Some people are asking $75-125 each for them.

Obsolete devices tent to be very expensive but this
does not mean that amateurs are likely to pay $100
for a 30 Watt transistor. There are easier
and less expensive ways of generating 30W.

> But we could use a new hard drive and some software for the house,

Buy a nice new hard drive and go to www.linux.org to see how
you can get lots of very good software for free.

> I've been told my fellow hams are too cheap when it comes to this kind of
> thing, but they're the ones most likely to build things with these, right?

The market will decide how much they are worth. You will
either have to accept the going rate or hold on to them
in the hope that you will get a better offer. I'm a keen
homebrewer and I certainly wouldn't pay 50, 25 or even
10 dollars for them. Sorry! that's probably not what
you wanted to hear.

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

1630. Re: HF transceiver miniature

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 12:09:13 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c7a284a$0$11655@echo-01.iinet.net.au>
Source record: 46069

Eamon
Thanks for your comments
A few questions:

"Eamon Skelton" <Xnospam@oceanfree.net> wrote in message
news:8g6b5a.7ue.ln@my.linux.box...
> In article <3c78b099$0$9073@echo-01.iinet.net.au>, Richard Hosking wrote:
>
> > Reasonable strong signal handling
>
> High-level mixer. diode ring, passive mosfet mixer (H-mode)
> or high-level IC mixer (AD831).

AD831 somewhat expensive
Where can I find the circuit for the H mixer?

> (2) important components
> > Power amp transistors
>
> CB PA transistors - I don't know what they use in modern CB's,
> The 2SC1969, 2SC1307 and 2SC1945 were popular choices in
> the old days.

Digkey has TO-126 devices (cant remember the exact no.)
cheap

>
> > IF amp
> > The venerable MC1350 still seems not a bad choice but can you get it in
SM?
>
> The MC1350 is still available. I believe they are no longer in
> production so stocks will dry up eventually. I think there is a SM
> version but I've never seen one.
>
> > Is there a better choice with AGC?
>
> I don't like to recommend something I haven't tried myself but
> have a look at the AD603. I have heard good reports about them
> from some of the folks on the UK homebrew net (3.727MHz).
>
> The National Semiconductor CLC520 is another one worth
> looking at.

I may even try a discrete solution using DG MOSFETs

> I have data-sheets for both, if you can't find them on the
> web.
>
> > Filter
> > I thought I would use a conventional monolithic filter as a simple
solution.
>
> If you can find one at a reasonable price. Check Aleksander Stare's
> web-page for some homebrew ladder filter designs. There is a link
> on my page. See below.

I will check this. What about carrier/BFO crystals?

> > LO
> > I will use a free running VFO with crystal osc mixer/BPF for each band.
The
> > VFO will be stabilized by my counter/PLL module
>
> Sounds good. If you are using the usual 5-5.5MHz approach, a
> DDS might be a better approach, especially for mobile use.

DDS takes too much current though it is certainly simpler once you have the
board - no need for mixers/filters etc for the L:O
What about spurs - how do these perform in a European situation with lots of
strong local signals on say 7 MHz?

Richard

1631. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 12:17:53 UTC
From: Win Hill <whill@mediaone.net>
Message-ID: <3C7A29D0.33FD64E3@mediaone.net>
Source record: 46070
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett wrote:
>
> Now, about those filters. Here's the shape I'd like to see:
>
> http://www.iscointl.com/aboutoverview.html
>
> It's the red curve:)

Indeed, an ideal draftsman's curve, 1% flat-top pass bandwidth
with 0dB loss, to 90dB attenuation with 0.2% frequency change.

;-)

Thanks, /.-.\
((( )))
- Win \\\//
\\\
Winfield Hill //\\\
Rowland Institute for Science /// \\\
Cambridge, MA \/ \/

1632. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 12:20:40 UTC
From: Win Hill <whill@mediaone.net>
Message-ID: <3C7A2A7B.92B935A1@mediaone.net>
Source record: 46071
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett wrote:
>
> John Miles <jmiles@pop.removethistomailme.net> wrote
>
>> And, more to the point, why doesn't anyone sell a low-noise 3-terminal
>> regulator? The old-school LM723 is not a very elegant solution
>> considering the number of pins and amount of support circuitry that
>> chip requires.... yet it still seems to be the only game in town for
>> low-noise regulation.
>
> Hi John,
>
> I just Googled and got 61,000 hits on low noise regulators. I checked
> the majors - Motorola, NatSem, Philips, etc.
>
> It seems they are all on the bandwagon for low noise LDO regulators.
> Typical specs are 30uV to 40uV up to 100KHz, and 150mA to 250Ma load
> current. All the ones I checked use a PNP to drive the output...

Sadly "low-noise" only by the force of their own claims, in reality
about 10x higher noise than the 723 (with a reference capacitor) and
other truly low-noise regulators.

Thanks, /.-.\
((( ))
- Win \\\//
\\\
Winfield Hill //\\\
Rowland Institute for Science /// \\\
Cambridge, MA \/ \/

1633. Re: First Timer Project Suggestions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 14:43:49 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0202250643.260d61c2@posting.google.com>
Source record: 46072
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Hi Rob,
look at Harry's Homebrew Pages http://pmp3.net/harry/
Many guys start with his simple FM transmitter (any FM broadcast RX
works as a counterpart) or other of his simple projects.

Have fun !
BR from Ivan

1634. FA: Pair of Hammarlund air-variable Capacitors (HV)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 15:20:19 UTC
From: J&S <jsestates7@hotmail.com>
Message-ID: <TCse8.15631$ZC3.1284915@newsread2.prod.itd.earthlink.net>
Source record: 46073
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.cb,rec.radio.shortwave,rec.radio.swap,sci.electronics.components,sci.electronics.equipment,sci.electronics.misc

For auction on E-Bay

One pair of unused Hammarlund air-variable capacitors.
Ceramic end pieces for high voltage application.
Good for neutralizing caps in hombrew high power
amplifiers or similar application.

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1335114903

1635. 813 Amp/B&W Posting

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 18:59:20 UTC
From: Patrick Croft <mai@iquest.net>
Message-ID: <3C7A8988.DFDF98FF@iquest.net>
Source record: 46074

A posting appeared over the weekend noting a fellow was wanting a RF deck, possibly a B&W.

This morning it appears off the server. If the party hunting the amp deck would e-mail I may be of assistance.

Bests,

Patrick
W9GTA

1636. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 19:08:44 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0202251108.1f6b6690@posting.google.com>
Source record: 46075
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Win Hill <whill@mediaone.net> wrote in message news:<3C7A2A7B.92B935A1@mediaone.net>...

> > It seems they are all on the bandwagon for low noise LDO regulators.
> > Typical specs are 30uV to 40uV up to 100KHz, and 150mA to 250Ma load
> > current. All the ones I checked use a PNP to drive the output...
>
> Sadly "low-noise" only by the force of their own claims, in reality
> about 10x higher noise than the 723 (with a reference capacitor) and
> other truly low-noise regulators.
>
> ___
> Thanks, /.-.\
> ((( ))
> - Win \\\//
> \\\
> Winfield Hill //\\\
> Rowland Institute for Science /// \\\
> Cambridge, MA \/ \/

The 7805, LM340, and 723 are not LDO regulators. They might be
comparing their performance against the LM2940, which is spec'd at
700uV from 10Hz-100kHz.

It's good to have something real bad to compare yourself against:)

Best Regards,

Mike Monett

1637. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 19:13:06 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0202251113.7069e5e4@posting.google.com>
Source record: 46076
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Win Hill <whill@mediaone.net> wrote in message news:<3C79A039.A19A1815@mediaone.net>...

> One solution is to use a precision voltage reference IC as the
> regulator. For example, an LT1021 in the DCN8-10 version costs
> only $3.17 (singles), yet has 1% initial accuracy and less than
> 4uV p-p of 0.1 to 10Hz noise, and 2.2uV rms in a 10Hz to 10kHz
> bandwidth. It also specs 105dB of ripple rejection, so 0.5V of
> input ripple should create under 2.5uV at the output.

[...snip excellent solution]
> ___
> Thanks, /.-.\
> ((( ))
> - Win \\\//
> \\\
> Winfield Hill //\\\
> Rowland Institute for Science /// \\\
> Cambridge, MA \/ \/

Win,

Did you see how they measure the noise in the LT1021?

"Note 6: RMS noise is measured with a 2-pole highpass filter at
10Hz and a 2-pole lowpass filter at 1kHz. The resulting output is
full-wave rectified and then integrated for a fixed period, making
the final reading an average as opposed to RMS. Correction factors
are used to convert from average to RMS and correct for the
non-ideal bandpass of the filters."

I wonder if this is a valid method of treating Gaussian noise, and
why they didn't use a conventional true-RMS meter like the HP3400A?

Best Regards,

Mike Monett

1638. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 20:12:30 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C7A9AC7.620B@pop.removethistomailme.net>
Source record: 46078
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett wrote:
>
> The biggest problem is they are all low voltage - 1.5V to 5.0V, and
> there is no access to the divider to change the output. So it looks
> like the 723 is still the best solution for higher voltages.
> Fortunately it still seems to be in volume production, at least at
> NatSem.

Right... there are plenty of specialty parts, but nothing in the 723's
league that I can simply order from Digi-Key or drive down the street
and buy off the rack at Active.

Just as important, there's nothing I can just substitute for a 78xx.
What I really want is a "78LN05" or a "78LN12."

Win's circuit with the LED is pretty nifty. I may try that next time I
find myself reaching for a Zener.

>
> Now, about those filters. Here's the shape I'd like to see:
>
> http://www.iscointl.com/aboutoverview.html
>
> It's the red curve:)

Can't read the graph legend, unfortunately. 2 dB/division, shyeah!

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1639. Re: HF transceiver miniature

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 21:28:45 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <daae5a.26g.ln@my.linux.box>
Source record: 46080

In article <3c7a284a$0$11655@echo-01.iinet.net.au>, Richard Hosking wrote:

> AD831 somewhat expensive
> Where can I find the circuit for the H mixer?

It was published in the RADIO COMMUNICATION HANDBOOK (RSGB). I don't
have the book but I have got a reasonably good photocopy of the circuit.
I can't use my scanner at the moment, I'll see if I can get a good
shot of it with my digital camera.

Also, have a look at Charlos Potma's web-page. See my links page.

> I may even try a discrete solution using DG MOSFETs

I had a pair of mosfets in one of my rigs. They have
plenty of gain and very very low noise. I found it
difficult to get reasonable AGC characteristics with
the circuit I used. MK-II has got a DG FET as the
first IF amp and an MC1350 as the second IF. This
combination works really well.

http://homepage.eircom.net/~ei9gq/ifamp.html

>> If you can find one at a reasonable price. Check Aleksander Stare's
>> web-page for some homebrew ladder filter designs. There is a link
>> on my page. See below.
>
> I will check this. What about carrier/BFO crystals?

You might be able to use the same crystals for the BFO/CIO.
It is quite easy to pull a crystal down by a couple
of KHz by putting a little inductance in series with it.
It's not as easy to pull them up in frequency.

> DDS takes too much current though it is certainly simpler once you have the
> board - no need for mixers/filters etc for the L:O
> What about spurs - how do these perform in a European situation with lots of
> strong local signals on say 7 MHz?

I don't have one myself so I'm not really qualified to answer. If you
use a high clock frequency, a relatively low LO frequency and a good
LPF of BPF on the DDS output, the spurs should be quite low. If you
want the DDS to directly generate the LO signal for the higher HF
bands, then I would expect fairly high spurs on the LO.

I really must get around to buying some DDS chips. Is the AD9850 still
the best one to start with?

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

1640. Re: First Timer Project Suggestions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 21:52:53 UTC
From: geoffrey brown <geoff@spontaflex.freeserve.co.uk>
Message-ID: <a5ebnosh1@news5.svr.pol.co.uk>
Source record: 46082
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

have a look at my website

http://www.spontaflex.freeserve.co.uk/

many circuits suitable for fist time construction and they all work

OK1SIP <remove_ok1sip@atlas.cz> wrote in message
news:5f5159fa.0202250643.260d61c2@posting.google.com...
> Hi Rob,
> look at Harry's Homebrew Pages http://pmp3.net/harry/
> Many guys start with his simple FM transmitter (any FM broadcast RX
> works as a counterpart) or other of his simple projects.
>
> Have fun !
> BR from Ivan

1641. Temperature compensation for 60khz antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 22:06:17 UTC
From: stephendeese@hotmail.com
Message-ID: <25cad608.0202251406.3398f530@posting.google.com>
Source record: 46079

Hi,

I am hoping that some of you RF guru's can steer me in the right direction.

I have a small ferrite antenna (ferrite rod, coil and cap) which is tuned to 60khz for the WWVB atomic clock signal. I need for the antenna to stay tuned over a large range of temperatures (-20 to +60 C).

Does anyone know how to do this? I have heard that you can use a varible capacitance diode for this?

Thanks and God Bless you in Chirst!
Stephen

1642. Converter/receiver for 136-138kHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 23:01:02 UTC
From: la8ak.xnd@online.no
Message-ID: <3c7abe79.427854841@news.online.no>
Source record: 46081

planning to build a converter for 136-138kHz, but have not yet decided
if I should use 60 or 100kHz xtal filter for ultimate selectivity
since nearby signals are 50-60dB stronger than amateur signals on
136kHz. See http://sk7do.te.hik.se/~sm5bsz/xtals.htm

I am not looking for a simple design, but need some ideas to start
constructing the converter or receiver, have checked
http://home.swipnet.se/~w-54761/lflinks.htm but it doesn't show
receivers, also have the LF Source Book (G3LDO).
I have some coils (Q=650) of 1.5 and 4.6mH, but they have no tapping,
could make a good bandpassfilter on VLF

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

1643. Re: Help Rect/reg ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-25 23:47:06 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <kigj7ugqq30t5abvbq9uoaturg6q4jd9fr@4ax.com>
Source record: 46083

"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote:

>the stator has 2 leads that i assume go to a bridge input in the rect/reg...
>there is one lead that goes to the battery...
>no feedback!
>the rotor is the flywheel with some permanent magnets imbedded..
>like i mentioned earlier the output is about 30 vac at max rpm..

Okay, this is not an alternator. It's a magneto.

-

Jim Adney jadney@vwtype3.org
Madison,Wisconsin USA

1644. Re: Help Rect/reg ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-26 00:19:19 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <u7ll4nqntv2928@corp.supernews.com>
Source record: 46084

john deere calls it an alternator and i have to agree...
there aabout 20 poles on the stator..
in addition there's a magneto for ignition.
"Jim Adney" <jadney@vwtype3.org> wrote in message
news:kigj7ugqq30t5abvbq9uoaturg6q4jd9fr@4ax.com...
> "Henry Kolesnik" <wd5jfr@oklahoma.net> wrote:
>
> >the stator has 2 leads that i assume go to a bridge input in the
rect/reg...
> >there is one lead that goes to the battery...
> >no feedback!
> >the rotor is the flywheel with some permanent magnets imbedded..
> >like i mentioned earlier the output is about 30 vac at max rpm..
>
> Okay, this is not an alternator. It's a magneto.
>
> -
> ---
> Jim Adney jadney@vwtype3.org
> Madison,Wisconsin USA
> ---

1645. Re: Help Rect/reg ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-26 00:31:38 UTC
From: Gary Glaenzer <nobulltrans@irtc.net>
Message-ID: <KHAe8.18$%R52.393329@news2.randori.com>
Source record: 46085

Henry;

Do you have a shop locally that specializes in alternators and starters ?

They generally have just about anything you would need for that type of alternator.

g

"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message news:u7ll4nqntv2928@corp.supernews.com...
> john deere calls it an alternator and i have to agree...
> there aabout 20 poles on the stator..
> in addition there's a magneto for ignition.
> "Jim Adney" <jadney@vwtype3.org> wrote in message
> news:kigj7ugqq30t5abvbq9uoaturg6q4jd9fr@4ax.com...
> > "Henry Kolesnik" <wd5jfr@oklahoma.net> wrote:
> >
> > >the stator has 2 leads that i assume go to a bridge input in the
> rect/reg...
> > >there is one lead that goes to the battery...
> > >no feedback!
> > >the rotor is the flywheel with some permanent magnets imbedded..
> > >like i mentioned earlier the output is about 30 vac at max rpm..
> >
> > Okay, this is not an alternator. It's a magneto.
> >
> > -
> > --
> > Jim Adney jadney@vwtype3.org
> > Madison,Wisconsin USA
> > --
>
>
>

1646. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-26 03:03:04 UTC
From: ritter@ciphersbyNOSPAMritter.com
Message-ID: <3c7afa7a.38636640@netnews.att.net>
Source record: 46086
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On 25 Feb 2002 11:13:06 -0800, in
<7e4a2a11.0202251113.7069e5e4@posting.google.com>, in
rec.radio.amateur.homebrew mrmonett@yahoo.com (Mike Monett) wrote:
>[...]
>Win,
>
> Did you see how they measure the noise in the LT1021?
>
> "Note 6: RMS noise is measured with a 2-pole highpass filter at
> 10Hz and a 2-pole lowpass filter at 1kHz. The resulting output is
> full-wave rectified and then integrated for a fixed period, making
> the final reading an average as opposed to RMS. Correction factors
> are used to convert from average to RMS and correct for the
> non-ideal bandpass of the filters."
>
> I wonder if this is a valid method of treating Gaussian noise, and
> why they didn't use a conventional true-RMS meter like the HP3400A?

If the point was to measure "1/f" noise, we expect that to be
negligible above 1kHz anyway.

As a guess, it may be that a conventional RMS voltmeter does not have
a long enough time constant for 1/f work.

Terry Ritter KF5MH

1647. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-26 04:36:57 UTC
From: Win Hill <whill@mediaone.net>
Message-ID: <3C7B0F49.225C2FD6@mediaone.net>
Source record: 46087
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Miles wrote:
>
> Win's circuit with the LED is pretty nifty. I may try
> that next time I find myself reaching for a Zener.

It is nifty, but it wasn't not my circuit, it was LTC's.

Thanks, /.-.\
((( ))
- Win \\\//
\\\
Winfield Hill //\\\
Rowland Institute for Science /// \\\
Cambridge, MA \/ \/

1648. Re: Temperature compensation for 60khz antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-26 06:38:22 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0202252238.7924690c@posting.google.com>
Source record: 46088

Hi Stephen,
you wrote:
> I have a small ferrite antenna (ferrite rod, coil and cap) which is
> tuned to 60khz for the WWVB atomic clock signal. I need for the
> antenna to stay tuned over a large range of temperatures (-20 to +60
> C).
The antenna is a coil on a ferrite rod. It is tuned to resonance at 60
kHz by a capacitor or a set of them. Ceramic capacitors are
manufactured with temperature coefficient ranging from negative to
positive values (it depends on the dielectric material). It is common
to neglect this fact for many purposes. You should select the tuning
capacitor(s) with such temperature coefficient to compensate the
temperature coefficient of the antenna. This way, the resonant
frequency of the circuit will remain constant during temperature
variations.

BR from Ivan

1649. Re: WTB PYE 19" Rack cabinet (49 x 30.2 x 30.8 cm)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-26 07:32:16 UTC
From: Ron <bofars@ntlworld.com>
Message-ID: <PVGe8.5767$R16.995249@news11-gui.server.ntli.net>
Source record: 46089
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

I have an PYE 19 inch rack about 144 cm tall for sale at £40
if your interested.
Ron G4XOU in Nottingham

"Richard Daventry" <newsgps_email@ntlworld.com> wrote in message
news:uDOd8.22169$hM6.2780796@news6-win.server.ntlworld.com...
> I need at least one more PYE 19" rack cabinet to match the 2 I already
> have. Size is 49cm wide, 30.2cm high and 30.8 cm deep (not measuring
> the back panel that sticks out another 7 cm). Says, "PYE
> Communications Equipment" at front of cabinet. Ventilation grill
> covers backhalf of top panel. Be particularly nice if any source is
> say 30 miles of Wakefield in West Yorkshire, (but perhaps unlikely).
>
> I suppose if you have a cabinet it may contain some older PYE/PHILIPS
> gear. I'd buy that if cheap (just to get the cabinet!!). Thanks. Rich.
>

1650. Re: HF transceiver miniature

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-26 08:50:11 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c7b4b1f$0$14145@echo-01.iinet.net.au>
Source record: 46090

"Eamon Skelton" <Xnospam@oceanfree.net> wrote in message
news:daae5a.26g.ln@my.linux.box...
> In article <3c7a284a$0$11655@echo-01.iinet.net.au>, Richard Hosking wrote:
>
> > DDS takes too much current though it is certainly simpler once you have
the
> > board - no need for mixers/filters etc for the L:O
> > What about spurs - how do these perform in a European situation with
lots of
> > strong local signals on say 7 MHz?
>
> I don't have one myself so I'm not really qualified to answer. If you
> use a high clock frequency, a relatively low LO frequency and a good
> LPF of BPF on the DDS output, the spurs should be quite low. If you
> want the DDS to directly generate the LO signal for the higher HF
> bands, then I would expect fairly high spurs on the LO.
>
> I really must get around to buying some DDS chips. Is the AD9850 still
> the best one to start with?
>
> 73, Ed. EI9GQ.

I have a board using the AD9854 on my website
I havent tried the AD9850. It has less DAC resolution (10 vs12 bits for the
9854)
This would translate to worse spur performasnce.However it is somewhat
simpler to drive.
Have not used the DDS as a receiver LO however. Perhaps I will hook it up to
my test receiver with a wire antenna and try it
Alternatively the QRP rig has a sensitive receiver.
It works well as a sweep generator - I could try making up a few of the
filters mentioned on Aleksander Stares page and see how how they perform.

Richard

1651. Re: WTB PYE 19" Rack cabinet (49 x 30.2 x 30.8 cm)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-26 10:07:41 UTC
From: Richard Daventry <newsgps_email@ntlworld.com>
Message-ID: <26Je8.3097$Hg1.557129@news6-win.server.ntlworld.com>
Source record: 46091
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

Too big. But thanks for posting. Maybe someone else might be interested.

"Ron" <bofars@ntlworld.com> wrote in message
news:PVGe8.5767$R16.995249@news11-gui.server.ntli.net...
> I have an PYE 19 inch rack about 144 cm tall for sale at ï¿½40
> if your interested.
> Ron G4XOU in Nottingham

1652. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-26 11:22:48 UTC
From: Ian Buckner <Ian_Buckner@agilent.com>
Message-ID: <1014722570.807478@cswreg.cos.agilent.com>
Source record: 46094
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I missed Win's LED circuit, but I suspect I can guess it.

Many years ago I had a need for a low noise reference, with a decent TC but did not need very high accuracy. I did it using a 2.2V zener with a TC of -2mV/deg C which compensated for the associated transistor Vbe drift, resulting in a constant emitter current (and voltage).

The important thing to note is that at low voltages, Zener diodes are really Zener diodes, and have very low noise. At higher knee voltages so-called Zener diodes are actually avalanche diodes, which can be very
noisy. The transition between the two modes of operation is around 5.6V - the TC of the two modes is opposite in sign, you get cancellation
when the two modes have about the same contribution.

I'm not sure whether these low voltage zeners are still readily available,
however.

Ian

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message news:3C7A9AC7.620B@pop.removethistomailme.net...
> Mike Monett wrote:
> >
> > The biggest problem is they are all low voltage - 1.5V to 5.0V, and
> > there is no access to the divider to change the output. So it looks
> > like the 723 is still the best solution for higher voltages.
> > Fortunately it still seems to be in volume production, at least at
> > NatSem.
>
> Right... there are plenty of specialty parts, but nothing in the 723's
> league that I can simply order from Digi-Key or drive down the street
> and buy off the rack at Active.
>
> Just as important, there's nothing I can just substitute for a 78xx.
> What I really want is a "78LN05" or a "78LN12."

>
> Win's circuit with the LED is pretty nifty. I may try that next
time I
> find myself reaching for a Zener.
>
> >
> > Now, about those filters. Here's the shape I'd like to see:
> >
> > http://www.iscointl.com/aboutoverview.html
> >
> > It's the red curve:)
>
> Can't read the graph legend, unfortunately. 2 dB/division, shyeah!
>
> -- jm
>
> ----------
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> ----------

1653. Re: Temperature compensation for 60khz antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-26 12:39:36 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a5g05l$71ivr$1@ID-124126.news.dfncis.de>
Source record: 46095

Keeping the antenna in tune will be the least of your problems. The
remainder of the receiver and equipment will be much harder to keep going
over THAT temperature range. And the DC battery supply will be extremely
unhappy too.

In any case, the candle-fat holding the turns in place on the rod will be
runny at 60C.

Suggestion - don't use a ferrite rod - use a whip with an air-core
tuning coil with a lot of turns on it.

Or use a small loop antenna. It will be just as sensitive as a ferrite rod.
Nothing magic about ferrites.

Reg G4FGQ

stevo <stephendeese@hotmail.com> wrote in message
news:25cad608.0202251406.3398f530@posting.google.com...
> Hi,
>
> I am hoping that some of you RF guru's can steer me in the right
> direction.
>
> I have a small ferrite antenna (ferrite rod, coil and cap) which is
> tuned to 60khz for the WWVB atomic clock signal. I need for the
> antenna to stay tuned over a large range of temperatures (-20 to +60
> C).
>
> Does anyone know how to do this? I have heard that you can use a
> varible capacitance diode for this?
>
> Thanks and God Bless you in Chirst!
> Stephen

1654. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-26 13:32:03 UTC
From: Win Hill <whill@mediaone.net>
Message-ID: <3C7B8CB6.F6D0477E@mediaone.net>
Source record: 46096
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Ian Buckner wrote:
>
> I missed Win's LED circuit, but I suspect I can guess it.

It wasn't using an LED as a low-voltage reference. Instead the
LED played a current-limiting role in LTC's circuit:

```
>12.8V 8.2
---+-----------/\/\-------,
| 220 |
+---/\/\---, |e
| RED LED | |/ pnp
'---|>|----+-+-------|
__|__ |\
| | | 10.0V
LT1021 | |------+----+------o 100mA max
DCN8-10 |_____| |+
| === 4.7uF low esr cap
| | solid tant, etc.
gnd gnd
```

The LED lights up as the circuit current limits. In one variant,
a darlington PNP power transistor with a green LED and 0.25 ohms
of emitter current-limiting resistance would allow up to 2A out.

```
___
Thanks, /.-.\
((( ))
- Win \\\//
\\\
Winfield Hill //\\\
Rowland Institute for Science /// \\\
Cambridge, MA \/ \/
```

1655. Re: Temperature compensation for 60khz antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-26 14:16:12 UTC
From: w4pqwhs@aol.com
Message-ID: <20020226091612.06509.00000648@mb-ms.aol.com>
Source record: 45997

Stephen,I have a question, How can you tell when the antenna gets out of resonance? thanks Harold W4PQW

1656. Re: Temperature compensation for 60khz antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-26 15:54:42 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a5gbf6$71r67$1@ID-124126.news.dfncis.de>
Source record: 45998

W4pqw HS wrote -
> I have a question, How can you tell when the antenna gets out of
> resonance?

==========

- - - and by how much does (or is expected) the antenna to get out of resonance. Until the magnitude of the problem is quantified there's no possibilty of finding a solution. There must be easier ways of telling the time in a refridgidator inside an oven.

1657. BF981 and TBB569 datasheets ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-26 19:12:10 UTC
From: mail@f5iko.com
Message-ID: <99e2cce8.0202261112.3c25f3b3@posting.google.com>
Source record: 45999

Hi dear OMs,

I'm looking for BF981 fet and TBB569 FM receiver datasheets.
Can you help me?

Many thanks and best 73' de Yannick.....F5IKO

1658. Re: WTB PYE 19" Rack cabinet (49 x 30.2 x 30.8 cm)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-26 21:51:08 UTC
From: la8ak.xnd@online.no
Message-ID: <3c7be22c.502541859@news.online.no>
Source record: 46000
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

On Tue, 26 Feb 2002 10:07:41 -0000, "Richard Daventry"
<newsgps_email@ntlworld.com> wrote:

>Too big. But thanks for posting. Maybe someone else might be interested.
>
>"Ron" <bofars@ntlworld.com> wrote in message
>news:PVGe8.5767$R16.995249@news11-gui.server.ntli.net...
>> I have an PYE 19 inch rack about 144 cm tall for sale at £40
>> if your interested.
>> Ron G4XOU in Nottingham
>
>
>
suppose the one you request is for R18FM (or R17FM), T30FM and a
blindpanel of similar size? Think it will take R18FM and T100MN.

I have it, but use it for my 10m packet rig

73
LA8AK
--
remove ,xnd to reply

1659. Re: WTB PYE 19" Rack cabinet (49 x 30.2 x 30.8 cm)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-26 22:19:35 UTC
From: Richard Daventry <newsgps_email@ntlworld.com>
Message-ID: <hQTe8.52760$Ah1.6430452@news2-win.server.ntlworld.com>
Source record: 46001
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

"J M Noeding" <la8ak.xnd@online.no> wrote in message
news:3c7be22c.502541859@news.online.no...
> On Tue, 26 Feb 2002 10:07:41 -0000, "Richard Daventry"
> <newsgps_email@ntlworld.com> wrote:
> >
> suppose the one you request is for R18FM (or R17FM), T30FM and a
> blindpanel of similar size? Think it will take R18FM and T100MN.
>
> I have it, but use it for my 10m packet rig

Actually I got T30AM and R7AM. Weird I know.

1660. WTB: Part Disc Cap 3Pf 3KV

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-26 23:01:27 UTC
From: MIKE SOUHRADA <wb9iog@revealed.net>
Message-ID: <3C7C13C7.3E5C8B73@revealed.net>
Source record: 46002
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

Help!
Above part no longer available from Pac parts.
KenWood PN C91-0016-05

Tried a number of sites w/ no luck.

Anyone?

Mike
Iowa

1661. Rect/Reg update

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-27 00:22:08 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <u7o9lmgmsri875@corp.supernews.com>
Source record: 46003

I still haven't found anything specific about the rect/reg for the John Deere 140 but I found many sites about problems on motorcylces. For thos interest here are a few urls. Maybe a JD or motorcycler will come up with an actual diagram.

http://www.inwa.net/~m3047/rect-reg/rect-reg.html

http://www.users.waitrose.com/~paso/regulator.htm

http://www.angelfire.com/biz/snwvlly/bikes/charge.htm

tnx

hank wd5jfr

1662. Re: Temperature compensation for 60khz antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-27 01:46:37 UTC
From: stephendeese@hotmail.com
Message-ID: <25cad608.0202261746.205c66b9@posting.google.com>
Source record: 46004

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<a5gbf6$71r67$1@ID-124126.news.dfncis.de>...
> W4pqw HS wrote -
> > I have a question, How can you tell when the antenna gets out of
> > resonance?
>
> ==========
>
> - - - and by how much does (or is expected) the antenna to get out of
> resonance. Until the magnitude of the problem is quantified there's no
> possibilty of finding a solution. There must be easier ways of telling the
> time in a refridgidator inside an oven.

The application notes for the demodulator I am using warns that the
ferrite antenna must be temperature compensated. I will do some tests
soon. So, I don't know how much it actually effects it.

Unfortunatly, my application involves these devices being in remote
sensing boxes that actually do see these kind of temperatures.

As for the whip antennas.... how much would they cost in large
quantities? The ferrite rod antennas run about $1.30 each.

Can anyone steer me in the right direction as to a good book on this
topic?

Thanks again and May God richly bless you in Christ
Stephen

1663. MANUAL SALE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-27 02:41:33 UTC
From: joeee1621@aol.com
Message-ID: <20020226214133.17746.00000943@mb-ba.aol.com>
Source record: 46005

WE HAVE HUNDRED OF MANUALS TO CHOSE FROM ...CONTACT US FOR LIST ... NEW ONES DAILY...ALL COPIES $16 SHIPPED UNLESS OTHERWISE NOTED.

1664. URL for Dan's Small Parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-27 02:46:27 UTC
From: "Bob G. Mahrenholz" <bobm@edge.net>
Message-ID: <3C7C4883.FC5E12B8@edge.net>
Source record: 46006

Hi:
Anyone know what happened to Dan's Small Parts? www.fixnet.com doesn't work.

Bob - K4QQK

1665. Re: Temperature compensation for 60khz antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-27 03:14:36 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a5hjal$7iq63$1@ID-124126.news.dfncis.de>
Source record: 46007

stevo <stephendeese@hotmail.com> wrote in message
news:25cad608.0202261746.205c66b9@posting.google.com...
> "Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<a5gbf6$71r67$1@ID-124126.news.dfncis.de>...
> > W4pqw HS wrote -
> > > I have a question, How can you tell when the antenna gets out of
> > > resonance?
> >
> > ==========
> >
> > - - - and by how much does (or is expected) the antenna to get out of
> > resonance. Until the magnitude of the problem is quantified there's no
> > possibilty of finding a solution. There must be easier ways of telling
the
> > time in a refridgidator inside an oven.
>
> The application notes for the demodulator I am using warns that the
> ferrite antenna must be temperature compensated. I will do some tests
> soon. So, I don't know how much it actually effects it.
>
> Unfortunatly, my application involves these devices being in remote
> sensing boxes that actually do see these kind of temperatures.
>
> As for the whip antennas.... how much would they cost in large
> quantities? The ferrite rod antennas run about $1.30 each.
>
>
> Can anyone steer me in the right direction as to a good book on this
> topic?
==========

You seem to be starting right at the begining. Before you start buying
anything in quantity you MUST get one complete receiver FULLY PROVED &
WORKING.

If you think a ferrite rod antenna will work after a fashion, first obtain
one and make a start. THEN you can start worrying about temperature
coefficients. It might matter less than you think. But you won't know
until you have a very, very deep freezer plus a thermometer down to -50C,
and a hot oven plus another thermometer.

A whip antenna is just a 3 to 5 feet brass or steel rod or tube, 1/4"
diameter, strong enough to support its own weight, insulated at the botton
end. Like a car broadcast antenna. But you'll also need a simple ground with
a whip. Depends on whereabouts it will be used? Have you already got the

receiver? Will that work with its battery at the exteme temperatures? Otherwise you are just wasting time.

Get a thin book from your local library or book shop on simple receiving antennas. Any radio amateur book about antennas might help. But do not expect to find an antenna ready designed for your purpose. Ask the librarian.

I don't think the people on this newsgroup will be able to give you much more help until you tell us MUCH more about your project. We are floundering about in the dark at present, wondering whether we might make things even worse than they are.

Reg

1666. Re: URL for Dan's Small Parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-27 03:18:02 UTC
From: MIKE SOUHRADA <wb9iog@revealed.net>
Message-ID: <3C7C4FEA.D92AAE48@revealed.net>
Source record: 46008

"Bob G. Mahrenholz" wrote:
>
> Hi:
> Anyone know what happened to Dan's Small Parts? www.fixnet.com doesn't
> work.
>
> Bob
I think it's an ISP problem. I was just browsing there this afternoon
now I can't get it.
Mike

1667. Re: Temperature compensation for 60khz antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-27 03:38:20 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a5hkm2$7cr49$1@ID-124126.news.dfncis.de>
Source record: 46009

What you ought to be asking yourself -

Does the ferrite rod antenna increase or decrease in frequency as temperature increases ? By how much ? How much does it matter?

What is the field strength of the 60kHz transmitter at the receiving site ?

Is the ferrite rod likely to shatter at the extrememly cold temperature ?

Has the receiver already been designed and its input circuit fixed ? What input signal level does it need ?

1668. Re: Temperature compensation for 60khz antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-27 03:48:31 UTC
From: tdonaly@cs.com
Message-ID: <20020226224831.05804.00001163@mb-cl.news.cs.com>
Source record: 46010

Stephen wrote,
>
>The application notes for the demodulator I am using warns that the
>ferrite antenna must be temperature compensated. I will do some tests
>soon. So, I don't know how much it actually effects it.
>
>Unfortunatly, my application involves these devices being in remote
>sensing boxes that actually do see these kind of temperatures.
>
>As for the whip antennas.... how much would they cost in large
>quantities? The ferrite rod antennas run about $1.30 each.
>
>
>Can anyone steer me in the right direction as to a good book on this
>topic?
>
>Thanks again and May God richly bless you in Christ
>Stephen
>

Hi Stephen,
The _Amidon Inc._ book has curves of initial permeability vs. temperature for the various types of ferrite they sell. The curves are not linear, although portions
of some of them might be construed as straight enough if you squint at them just
right. This means you may have a difficult time with the temperature compensation.
Do you know the type of ferrite used in your antennas and the physical dimensions?
(The permeability of the rod depends much on its physical dimensions.) You will
probably have to experiment and seek guidance from Jehova - expect to be tested.

May The Lord bless you too.

Tom Donaly KA6RUH

1669. FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-27 04:23:59 UTC
From: Lou <tech@dp.net>
Message-ID: <a5hnt0$7ir$1@news.dp.net>
Source record: 46011

Hi,

Thanks for reading. Have lots of stuff to sell. Parts, tubes, etc. But the one thing most in the "homebrew" sector is:

I have a few coils, maybe copper (?) of a reasonable size. Look like homebrew transmitter coils or something. Also have a spool of wire. Not sure what type. IF you have any interest in anything, can e-mail pictures. MOST parts are going very cheap. Coils are about $2 - $3.50 each.

Shipping is extra on all items. ALL are sold as is regardless the condition - new or used. See tag for payment details.

Thanks again.

--
Lou
Owner of: C.L. FURLONG ENTERPRISES

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Closed on Holidays

1670. Re: FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-27 04:46:02 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C7C64AD.2B8@pop.removethistomailme.net>
Source record: 46012

Lou wrote:

> Also have a spool of wire. Not sure what type.

Darn, I was looking for the other kind.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1671. Re: URL for Dan's Small Parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-27 11:23:14 UTC
From: knox_k@nemaine.com
Message-ID: <3c7cc185.2109294@news.nemaine.com>
Source record: 46015

On Tue, 26 Feb 2002 20:46:27 -0600, "Bob G. Mahrenholz"
<bobm@edge.net> wrote:

>Hi:
>Anyone know what happened to Dan's Small Parts? www.fixnet.com doesn't
>work.
>
>Bob - K4QQK
>

It's not www.fixnet.com , it's http://www.fix.net/dans.html/

1672. Re: FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-27 12:22:09 UTC
From: amdx <amdx@att.net>
Message-ID: <Rb4f8.3341$106.163323@bgtnsc05-news.ops.worldnet.att.net>
Source record: 46013

>> Also have a spool of wire. Not sure what type.

-Darn, I was looking for the other kind.

I have the other kind, I'm sure what type,
but sorry it's not FS.

Mike

1673. Re: Fuse-type light bulb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-27 12:29:57 UTC
From: -Your Friend Bill- <none@coqui.net>
Message-ID: <3C7CD145.DC9FBF07@coqui.net>
Source record: 46014

-Your Friend Bill- wrote:
>
> Jim Adney wrote:
> >
> > -Your Friend Bill- <none@coqui.net> wrote:
> >
> > >Jim Adney wrote:
> > >
> > >> The bulbs I'm looking for look just like a pointy ended fuse: a
> > >> straight glass tube between the two end caps. The socket does not
> > >> resemble a fuse holder, however, so the more modern fuse lamps will
> > >> not work in there, they require the pointy ends.
> > >
> > >They do special orders for what they don't have in stock. I recall
> > >seeing ones like you describe in auto instrument panels too.
> > >As a last resort...could you build up and file down some solder on the
> > >ends of a regular fuse lamp? Would it fit?
> >
> > I could certainly do that. Do you think the bulb would tolerate it?
>
> Your guess is as good as mine. The filament may or may not be enclosed
> in its own sealed glass tube and the ends are just tacked on....you
> might be able to glob on some solder without heating it too much.
> -Bill

A followup....
I got the fuse lamps that I had ordered and got the radio lit again.
Turns out all the 'fuse lamp clips' had come unsoldered from their PCB
and the bulbs were in fact ok.
At any rate, yes, the lamps are a sealed glass thingie and the tips are
simply soldered on. Methinks you could either build up the flat ends
with solder or maybe even remove the tip ends from your burnt out lamps
and solder them on to the new ones.
-Bill

1674. Re: 7805 output inductance (was AD9854-driven PLL (was Re: DDS cleanup using PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-27 16:01:56 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0202270801.7c02c048@posting.google.com>
Source record: 46016
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

```
mrmonett@yahoo.com (Mike Monett) wrote in message
news:<7e4a2a11.0202251113.7069e5e4@posting.google.com>...
> Win Hill <whill@mediaone.net> wrote in message news:<3C79A039.A19A1815@mediaone.net>...
>
> > One solution is to use a precision voltage reference IC as the
> > regulator. For example, an LT1021 in the DCN8-10 version costs
> > only $3.17 (singles), yet has 1% initial accuracy and less than
> > 4uV p-p of 0.1 to 10Hz noise, and 2.2uV rms in a 10Hz to 10kHz
> > bandwidth. It also specs 105dB of ripple rejection, so 0.5V of
> > input ripple should create under 2.5uV at the output.
>
> [...snip excellent solution]
> > ___
> > Thanks, /.-.\
> > ((( ))
> > - Win \\\//
> > \\\
> > Winfield Hill //\\\
> > Rowland Institute for Science /// \\\
> > Cambridge, MA \/ \/
>
> Win,
>
> Did you see how they measure the noise in the LT1021?
>
> "Note 6: RMS noise is measured with a 2-pole highpass filter at
> 10Hz and a 2-pole lowpass filter at 1kHz. The resulting output is
> full-wave rectified and then integrated for a fixed period, making
> the final reading an average as opposed to RMS. Correction factors
> are used to convert from average to RMS and correct for the
> non-ideal bandpass of the filters."
>
> I wonder if this is a valid method of treating Gaussian noise, and
> why they didn't use a conventional true-RMS meter like the HP3400A?

Win,

I was curious about the correction factor needed to convert an
average-reading voltmeter to rms when measuring a gaussian signal.

Analog Devices shows two different values in their conversion
tables:
```

Source rms value average %error url

AN268 0.333V 0.266V -20.2% [1]
AD736 0.333V 0.295V -11.496% [2]
AD737 0.333V 0.295V -11.4% [3]

Terry Ritter quotes from the Art of Electronics [4]

"You can use a simple averaging-type ac voltmeter instead . . . ."
"To get the rms voltage of Gaussian noise, multiply the 'rms'
value you read on an averaging ac voltmeter by 1.13 (or add 1dB)."

This corresponds with the information in AD736 and AD737, but it
would be nice to find the derivation.

A derivation is in "Professor Leach's Noise Potpourri" [5], at the
end of Chapter 3 - Characteristics of Noise. [6]

The correction factor is 2 / sqrt(pi) = 1.12837916709551

"Thus the meter reading must be multiplied by 1.128 to obtain the
correct reading with a Gaussian noise voltage."

Rounding 1.128 gives 1.13, which is the value shown in AOE.

Using an average-reading voltmeter instead of a true-rms may give
unpredictable errors. An average-reading voltmeter is usually not
designed to handle a large crest factor, and the correction factors
assume the noise is truly Gaussian. It may not be.

Terry Ritter has done extensive analysis of noise generators, and
shows that a noise generator that is not completely characterized
may have significant errors. [7], [8]

Terry's results show a true-rms measurement may give more repeatable
results than an average-reading with an unknown noise source.

As a side note, Dr. Johnson used a true-rms meter in his July, 1928
Physical Review paper on resistor noise. He used a thermocouple to
measure resistor noise. [9]

Nyquist presented a theoretical analysis in the same issue. [10]

His concept of two resistors separated by a transmission line is
still used to derive Johnson noise. [11]

URLS

[1]
http://www.analog.com/library/applicationNotes/amplifiersLinear/AN268.pdf

[2]
http://www.analog.com/productSelection/pdf/ad736.pdf

[3]
http://www.analog.com/productSelection/pdf/AD737_c.pdf

[4]
http://www.ciphersbyritter.com/RES/NOISE.HTM

[5]
http://users.ece.gatech.edu/~mleach/ece6416/noisepot/

[6]
http://users.ece.gatech.edu/~mleach/ece6416/noisepot/chap03.pdf

[7] "Random Noise Sources"

http://www.ciphersbyritter.com/NOISE/NOISRC.HTM

[8] "Experimental Characterization of Recorded Noise"

http://www.ciphersbyritter.com/NOISE/NOISCHAR.HTM

[9] J. B. Johnson, "Thermal Agitation of Electricity in Conductors",
Phys. Rev. 32, 97 (1928)

http://faraday.ufbi.ufl.edu/~thmareci/bch6741/further_reading/PR_32_97.pdf

[10] H. Nyquist, "Thermal Agitation of Electric Charge in
Conductors", Phys. Rev. 32, 110-113 (1928)

http://faraday.ufbi.ufl.edu/~thmareci/bch6741/further_reading/PR_32_110.pdf

[11]
http://www.pas.rochester.edu/~dmw/ast203/Lectures/Lect_20.pdf

Best Regards,

Mike Monett

1675. NEW on the R.L. Drake Virtual Museum

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-27 16:11:24 UTC
From: JM CHERRY <jmc@dproducts.be>
Message-ID: <3c7d0517$0$33510$ba620e4c@news.skynet.be>
Source record: 46017

Hi all,

New QST on the R.L. DRAKE VIRTUAL MUSEUM pages !!!

February 27/2002 - Drake TR-4 Transceiver (Recent Equipment)
(c) QST 12/1965 - page 80 Adobe pdf version

73,
Jean-Marie
JM CHERRY
http://www.dproducts.be/drake_museum

1676. Re: Temperature compensation for 60khz antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-27 17:58:06 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3C7D1E2E.BEA8A17D@ieee.org>
Source record: 46018

stevo wrote:

> "Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<a5gbf6$71r67$1@ID-124126.news.dfncis.de>...
> > W4pqw HS wrote -
> > > I have a question, How can you tell when the antenna gets out of
> > > resonance?
> >
> > ==========
> >
> > - - - and by how much does (or is expected) the antenna to get out of
> > resonance. Until the magnitude of the problem is quantified there's no
> > possibilty of finding a solution. There must be easier ways of telling the
> > time in a refridgidator inside an oven.
>
> The application notes for the demodulator I am using warns that the
> ferrite antenna must be temperature compensated. I will do some tests
> soon. So, I don't know how much it actually effects it.
>
> Unfortunatly, my application involves these devices being in remote
> sensing boxes that actually do see these kind of temperatures.
>
> As for the whip antennas.... how much would they cost in large
> quantities? The ferrite rod antennas run about $1.30 each.
>
> Can anyone steer me in the right direction as to a good book on this
> topic?
>
> Thanks again and May God richly bless you in Christ
> Stephen

I can't help on the "how to" but can report that the delay through the tuned circuit will change with tuning (temperature). This means the changing delay will show up as a frequency (phase) difference that may be large enough to affect your measurements.

Bill K7NOM

1677. Homebrew Vacuum Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-27 18:07:50 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0202271007.1dc98245@posting.google.com>
Source record: 46019

Another ham and I were talking the other day here at work. We were duscussing our miniature vacuum chamber that we use for vacuum compliance testing.

He mentioned that he wouldn't mind trying to make his own transistors some day. Not the modern stuff, but something equivalent to the 1950s transistors.

I mentioned that it would be easier to make your own vacuum tubes.

My next comment was that you could use burned out light bulbs (finally a use for the things!!) because the hardest part would be the glass to metal seal. Every light bulb has at least two of them. What else you would need would be a small spot welder, a torch for glass working, and a vacuum pump (and associated miscelanea). You would also need a suitable material for the elements. The filament would be easy---old light bulbs again. Envelopes could be made from old glass jars. If you had them permantently connected to the pump when in use you wouldn't even need that great a vacuum tight seal---just keep the pump running.

I remember reading, I think in '200 Meters and Down', about a ham back in the 1920s that made his entire station with homemade tubes. What I was wondering is if anyone is crazy enough now days to be doing this.

Jim
N8EE

1678. Re: Homebrew Vacuum Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-27 19:38:39 UTC
From: "Geoffrey G. Rochat" <geoff777@777pkworks.com>
Message-ID: <a5jc66oci1@news.utelfla.com>
Source record: 46021

>Another ham and I were talking the other day here at work. We were
>duscussing our miniature vacuum chamber that we use for vacuum
>compliance testing.
>
>He mentioned that he wouldn't mind trying to make his own transistors
>some day. Not the modern stuff, but something equivalent to the 1950s
>transistors.
>
>I mentioned that it would be easier to make your own vacuum tubes.

<snip>

>
>I remember reading, I think in '200 Meters and Down', about a ham back
>in the 1920s that made his entire station with homemade tubes. What I
>was wondering is if anyone is crazy enough now days to be doing this.
>
>Jim
>N8EE

One H. P. Friedrichs has been building his own hobbyist tubes and
transistors for some time now. Unfortunately, all the on-line links I
have to his work are broken. I do know, however, that his book "Voice
Of The Crystal", wherein he describes how to actually *build* radios
from scratch rather than just assemble radios from parts, is available
from Lindsay Books: http://www.lindsaybks.com/bks2/vxtal/index.html

1679. Re: Homebrew Vacuum Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-27 19:49:21 UTC
From: troglodite@aol.com
Message-ID: <20020227144921.17709.00001253@mb-ba.aol.com>
Source record: 46020

>
>I remember reading, I think in '200 Meters and Down', about a ham back
>in the 1920s that made his entire station with homemade tubes. What I
>was wondering is if anyone is crazy enough now days to be doing this.

Yes, there is someone crazy enough. Unfortunately, I've lost his URL, but he is the author of the book "Voice of the Crystal" which shows how to make crystal sets from materials found at home. He had a go at making his own transistors, but it turned out to be too difficult, so he decided to make his own tubes instead. Last time I looked, he had a few samples. A search for the book title should yield his name, and you can go from there.

Doug Moore KB9TMY

1680. Re: ARRL again affirms eQSL Cards -OK- for DXCC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-27 23:37:04 UTC
From: Ronald Oberloh <wa0kds@yahoo.com>
Message-ID: <3C7D6D9F.41F65113@yahoo.com>
Source record: 46022
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

Kind of confused by this one (the following). I have received many QSL's
from DX that I did not originate (I did not send them a card first) so what
makes receiving a card from a eQSL log any different than a paper one ??

Come on people eQSL are the way it has to be done going forward into the 21st
Century.

Ron

"eQSL does not do this. eQSL receives a log and immediately makes
cards available to all stations in that log without checking the
information the other station has in his log or on his QSL. This
is not acting as a QSL Manager; this is just plain presumptive
QSLing. It is not adequate that the receiving station look at
the QSL and confirm it. How many do you think will refuse a QSL
from a really rare one who put the wrong call in his log so the
eQSL went to the wrong person, or if the signal reports don't
match, etc? There is no independent check here, thus eQSL is not
performing the duties of a QSL manager, thus the eQSLs are not
accepted by ARRL.

Jim Higgins wrote:

> On Sat, 23 Feb 2002 14:46:18 -0700, in
> <3c780dab$1@news.bnb-lp.com>, "Charles Johnston"
> <ctj92@cableone.net> wrote:
>
> >The ARRL has recently reaffirmed just one week after the original
> >historic announcement (08-Feb-2002) that eQSL Cards - ARE - accepted for
> >DXCC....this remark from the eQSL Webmaster found at this
> >
> >URL: http://www.eqsl.cc/qslcard/comments.cfm
> >"ARRL reaffirmed today that it will accept eQSLs that are mailed. AG or
> >not" (Webmaster)
> >15-Feb-2002
>
> Charles,
>
> The eQSL Webmaster is incorrect. His statement is based on a
> misunderstanding of the response received from ARRL.
>
> The ARRL response, available at the eQSL site if you look for it
> follows:
>

> ==== Begin ARRL Email ====
>
> From: Moore, Bill, NC1L [mailto:bmoore@arrl.org]
> Sent: Friday, February 08, 2002 12:31 PM
> To: 'Richard B. Drake'
> Cc: DXCC
> Subject: RE: Professionally Printed and mailed eQSL's
>
> Hi Rich: Something does not sound right here. You are saying that
> Dave is physically mailing out QSL cards by the US postal system?
> This is news to me.
>
> If you are my QSL manager and I send you my logs by e-mail, I am
> sending them direct from point A to point B. Just as if I was
> sending them to you by regular mail. This is OK. I remember
> somewhere several years ago that some people used to get their
> logs over the air on RTTY and another digital mode (AMTOR I
> think). Not a problem.
>
> However, if as the result of a log being sent to E-QSL, someone
> goes in and receives a card electronically and uses it for DXCC,
> that e-QSL cannot be accepted for DXCC credit under rule 2. I
> spent a bit of time with a simple shareware program to prove the
> unreliability of that method.
>
> However, if Dave, acting as QSL manager with station logs
> completes a card (even one from his printer) and sends it by mail
> to you, this is an acceptable exchange and we have see this often
> for several years now. (assuming he phyiscally checks the log).
> Many people use self-made cards from their printer. Each one is
> evaluated on a case by case basis, and many times under Section
> IV rule 4(b) we have conducted an audit to insure the vaildity of
> a card like this.
>
> In cases like this it would be REAL nice if they used a stamp or
> placed their initials or signature on it, but this is not
> required by the rules. However, this issue has been discussed and
> has been given some consideration.
>
> To clarify, if Dave is sending out cards through the US Postal
> System as the result of the log(s) he receives, this is OK.
> (This would basically be operating as QSL manager).
>
> Regards, Bill Moore NC1L
> DXCC Manager
>
> Note: Use of this message is authorized in discussions as long as
> it is used in its entirity and as long as parts are not edited
> out.
>

> ==== End ARRL Email ====
>
> The key to understanding what this means, which eQSL clearly does
> not, is found in the words "acting as QSL manager with station
> logs."
>
> A QSL manager receives a log from the managed station and waits
> for QSLs (or in the case of an operation like eQSL they would
> wait for individual or bulk uploaded contact information) to
> arrive requesting a QSL from the station he manages. He then
> checks the received card (contact info) vs the managed station's
> log to see that the contact is valid; i.e., call sign, signal
> report, band, mode, date and time (within a reasonable clock
> setting/drift error) match. If it is a valid QSO, he issues a
> card. If it isn't he should trash that QSL, not pass it along to
> the station he manages. It's an invalid QSO.
>
> eQSL does not do this. eQSL receives a log and immediately makes
> cards available to all stations in that log without checking the
> information the other station has in his log or on his QSL. This
> is not acting as a QSL Manager; this is just plain presumptive
> QSLing. It is not adequate that the receiving station look at
> the QSL and confirm it. How many do you think will refuse a QSL
> from a really rare one who put the wrong call in his log so the
> eQSL went to the wrong person, or if the signal reports don't
> match, etc? There is no independent check here, thus eQSL is not
> performing the duties of a QSL manager, thus the eQSLs are not
> accepted by ARRL.
>
> The ARRL has not changed their policy as regards acceptance of
> eQSLs for DXCC credit.
>
> Now, I can't speak for the ARRL, but it seems to me that some
> software changes by eQSL could probably overcome the objections I
> see.
>
> Let everyone who wants to QSL via eQSL upload their logs and let
> the software do the cross checking a QSL manager does. Do not
> show anyone any information (except what he posted himself) in
> any form, especially not as a QSL ready for download, until that
> cross check has been completed, then display cards only for QSOs
> that match. Now *THAT* seems to stand a chance of passing muster
> for acceptance for DXCC credit. Whether or not eQSL would need
> to print and mail a QSL at that point vs just present the card
> for download/printing I don't know, but eQSL is too far from that
> point to worry about that right now. The mechanism is already in
> place to print and mail if required, so that isn't a hurdle
> anyhow.
>
> So, as I see it, eQSL need to put the rest of the requirements

> met by authorized QSL managers in place. In the meantime they
> apparently are accepting $1 per card printed and mailed for cards
> that will *NOT* be accepted for DXCC credit.
>
> --
> Jim Higgins, quasimodo AT yahoo DOT com
> icbm: 33.55.34N, 80.24.21W

1681. Re: Help Rect/reg ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-27 23:48:39 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <03ko7uoad5a5ad4m6b72ktbnqsmdfkdp77@4ax.com>
Source record: 46023

"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote:

>john deere calls it an alternator and i have to agree...
>there aabout 20 poles on the stator..
>in addition there's a magneto for ignition.
>"Jim Adney" <jadney@vwtype3.org> wrote in message
>news:kigj7ugqq30t5abvbq9uoaturg6q4jd9fr@4ax.com...
>> "Henry Kolesnik" <wd5jfr@oklahoma.net> wrote:
>>
>> >the stator has 2 leads that i assume go to a bridge input in the
>rect/reg...
>> >there is one lead that goes to the battery...
>> >no feedback!
>> >the rotor is the flywheel with some permanent magnets imbedded..
>> >like i mentioned earlier the output is about 30 vac at max rpm..
>>
>> Okay, this is not an alternator. It's a magneto.

The magnets in an alternator are electromagnets so the output can be
controlled by the field current.

This may well be a matter of difinition, but if what you have has
permanent magnets, then no other kind of alternator regulator will
work there, as they all work on a completely different princilple.

To be fair, I have no idea how a magneto based charging system might
work, unless it just, as someone else suggested, uses a simple shunt
regulator.

-

Jim Adney jadney@vwtype3.org
Madison,Wisconsin USA

1682. Re: Temperature compensation for 60khz antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-28 00:23:05 UTC
From: k7itm@aol.com
Message-ID: <3200347.0202271623.3570c01@posting.google.com>
Source record: 46024

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<a5hjal$7iq63$1@ID-124126.news.dfncis.de>...
...
> coefficients. It might matter less than you think. But you won't know
> until you have a very, very deep freezer plus a thermometer down to -50C,
> and a hot oven plus another thermometer.

How did we get down to -50C? I only saw -20C in the original posting,
which is about what a standard home deepfreeze will do, and less
severe than a N. Dakota winter.

Cheers,
Tom

1683. Re: Temperature compensation for 60khz antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-28 00:42:27 UTC
From: k7itm@aol.com
Message-ID: <3200347.0202271642.3ffba363@posting.google.com>
Source record: 46025

Do heed some of the advice you've seen here: get things working at
room temperature first, with an eye toward the wide temperature range
(e.g., use parts rated for the range, and understand what will happen
as each drifts according to its temperature coefficient...only a few
of the parts' temperature variations will really matter, and good
engineering judgement will tell you which they are), then see what
actually happens over temperature. If you're confident you have the
receiver (and power source) nailed but are still worried about the
antenna, test it separately. If it looks like it will be a serious
problem, evaluate a bunch of them so you can see statistical variation
from one to the next. Try to get ones made from different batches of
ferrite.

If you're lucky enough, you'll find you don't need any compensation.
If you're a bit less lucky, you'll find you can get by with a simple
open-loop compensation. But maybe you'll decide that the temperature
never changes so rapidly that you can't do the occasional "autocal"
cycle, and that _might_ be the cheapest solution, depending on what
else is already in the system. Yes, there are variable capacitance
diodes, but that may or may not be (part of) the "right" answer for
your application, which you still haven't told us much about. As Reg
suggests, the right answer may be a different kind of antenna. Or
maybe a whole different kind of system: how about using GPS, for
example?

If it were critical to keep the antenna constantly tuned to the right
frequency, I can imagine a system in which you inject a known amount
of 60kHz + delta and 60kHz - delta, and you constantly monitor the
response of the antenna to those frequencies and keep it tuned
accordingly. But my impression is that's way too complicated for what
you are trying to do, no?

Cheers,
Tom

stephendeese@hotmail.com (stevo) wrote in message
news:<25cad608.0202251406.3398f530@posting.google.com>...
> Hi,
>
> I am hoping that some of you RF guru's can steer me in the right
> direction.
>
> I have a small ferrite antenna (ferrite rod, coil and cap) which is
> tuned to 60khz for the WWVB atomic clock signal. I need for the
> antenna to stay tuned over a large range of temperatures (-20 to +60

> C).
>
> Does anyone know how to do this? I have heard that you can use a
> varible capacitance diode for this?
>
> Thanks and God Bless you in Chirst!
> Stephen

1684. Re: Homebrew Vacuum Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-28 08:59:52 UTC
From: n2cqr@clix.pt
Message-ID: <3c7defee.19741776@news.clix.pt>
Source record: 46026

On 27 Feb 2002 10:07:50 -0800, jim.bolinger@lintek.aeroflex.com (JLB)
wrote:

>Another ham and I were talking the other day here at work. We were
>duscussing our miniature vacuum chamber that we use for vacuum
>compliance testing.

The 200 Meters and Down piece was inspiring. As I recall our intrepid
homebrew hero used pits of broken glass to fashion the envelope.

There was also a QST article (mid 60's I think) about an Argentine
amateur who made his own tubes. Discussion of this subject quickly
degenerated into a flame war on the Boatanchors mailing list. "Can
to! Can Not! etc.)

I remember hearing about guys who were working on homebrew point
contact devices. When you think about it, the galena--cats whisker
detectors were homebrew solid state diodes.

Ah, homebrew active devices! Imagine the bragging rights: Store
bought transistors? Appliance operator!
73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 15.7 W
http://planeta.clix.pt/n2cqr

1685. Re: Homebrew Vacuum Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-28 09:19:08 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <a5ksmf$87t2m$1@ID-61331.news.dfncis.de>
Source record: 46027

[...]
> >
> >I remember reading, I think in '200 Meters and Down', about a ham back
> >in the 1920s that made his entire station with homemade tubes. What I
> >was wondering is if anyone is crazy enough now days to be doing this.
> >
> >Jim
> >N8EE
>
> One H. P. Friedrichs has been building his own hobbyist tubes and
> transistors for some time now. Unfortunately, all the on-line links I
> have to his work are broken. I do know, however, that his book "Voice
> Of The Crystal", wherein he describes how to actually *build* radios
> from scratch rather than just assemble radios from parts, is available
> from Lindsay Books: http://www.lindsaybks.com/bks2/vxtal/index.html
>

H P Friedrichs homepage: includes review of "Voice of the Crystal" and
preview of his tube manufacturing book (work in progress) titled
"Instruments of Amplification": http://www.mindspring.com/~pfriedr/index.htm

---
Hans Summers
http://www.HansSummers.Com

1686. ts530 help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-28 11:20:22 UTC
From: Jeff Jenkins <jeffjkb@ntlworld.com>
Message-ID: <1d4s7ugljq5rdus5m5v3o6n5ug0313tn87@4ax.com>
Source record: 46028

I have just been given an old kenwood/trio ts-530s
where can i
1 obtain/download a full instrtuction mannual
or
2 basic tune up instructions
tnx jeff gw0jkb

1687. Re: Homebrew Vacuum Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-28 12:30:44 UTC
From: Dick <dick@langwang.demon.co.uk>
Message-ID: <MSJAHAA0Lif8Ewwh@langwang.demon.co.uk>
Source record: 46038

In article <3c7defee.19741776@news.clix.pt>, Bill Meara <n2cqr@clix.pt>
writes
>I remember hearing about guys who were working on homebrew point
>contact devices. When you think about it, the galena--cats whisker
>detectors were homebrew solid state diodes.
>
I seem to remember some articles in a UK publication (Practical
Wireless or Wireless World ?) in the early days of transistors about how to
make your own point contact transistors. It's a wee while ago but from what I
can recall it involved breaking open (carefully) Ge point contact diodes and
combining the piece of Ge with 2 point contact whiskers, think they got
some gain out of it but don't know what the frequency performance was like
- but in those days an Ft of 300 kc/s (well that's what it was in those days !!)
was an HF transistor !

If anyone is thinking about making their own valves/tubes suggest
they get a copy of either Gerald F.J. Tyne (ex-8KN) Saga of the Vacuum
Tube (reprint publ. Antique Electronic Supply, Temple AZ) or V.J. Phillips
Early Radio Wave Detectors (The Science Museum in assoc. with Peter
Peregrinus Ltd., London ISBN: 0 906048 24 9). The early valves/tubes were
very crude, simple devices and should be quite easy to duplicate provided
you're not looking for repeatable characteristics !!

Must go and have a cold shower, I'm beginning to fantasise about
memories of darkened shacks and faint blue glows to be seen inside 813s
mounted on open chassis in 19" racks ....
--
Dick
GM0MNL

1688. Re: Help Rect/reg ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-28 13:43:51 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <u7sd0qeel5ood7@corp.supernews.com>
Source record: 46029

see the following
I still haven't found anything specific about the rect/reg for the John Deere 140 but I found many sites about problems on motorcylces. For thos interest here are a few urls. Maybe a JD or motorcycler will come up with an actual diagram.

http://www.inwa.net/~m3047/rect-reg/rect-reg.html

http://www.users.waitrose.com/~paso/regulator.htm

http://www.angelfire.com/biz/snwvlly/bikes/charge.htm

tnx

hank wd5jfr

"Jim Adney" <jadney@vwtype3.org> wrote in message
news:03ko7uoad5a5ad4m6b72ktbnqsmdfkdp77@4ax.com...
> "Henry Kolesnik" <wd5jfr@oklahoma.net> wrote:
>
> >john deere calls it an alternator and i have to agree...
> >there aabout 20 poles on the stator..
> >in addition there's a magneto for ignition.
> >"Jim Adney" <jadney@vwtype3.org> wrote in message
> >news:kigj7ugqq30t5abvbq9uoaturg6q4jd9fr@4ax.com...
> >> "Henry Kolesnik" <wd5jfr@oklahoma.net> wrote:
> >>
> >> >the stator has 2 leads that i assume go to a bridge input in the
> >rect/reg...
> >> >there is one lead that goes to the battery...
> >> >no feedback!
> >> >the rotor is the flywheel with some permanent magnets imbedded..
> >> >like i mentioned earlier the output is about 30 vac at max rpm..
> >>
> >> Okay, this is not an alternator. It's a magneto.
>
> The magnets in an alternator are electromagnets so the output can be
> controlled by the field current.
>
> This may well be a matter of difinition, but if what you have has
> permanent magnets, then no other kind of alternator regulator will
> work there, as they all work on a completely different princilple.
>
> To be fair, I have no idea how a magneto based charging system might
> work, unless it just, as someone else suggested, uses a simple shunt
> regulator.

>
> -
> ---
> Jim Adney jadney@vwtype3.org
> Madison,Wisconsin USA
> ---

1689. toroid tester

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-28 13:48:30 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <u7sd9h9au64m37@corp.supernews.com>
Source record: 46030

the British magazine Electronic World Jan 2002, page 34 has a diagram for a one transistor toroid tester but no mention of how it's calibrated. Has anyone built one and does it work and how did you calibrate it? What kind of test equipment would work as well, any tips appreciated. I've got a buch of cores as well as sticks and I need to build a vlf antenna.
tnx
hank wd5jfr

1690. Type 6204 vacuum tube ID ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-28 13:57:33 UTC
From: Phil T <phil@vaxxine.com>
Message-ID: <3C7E374D.E63449E6@vaxxine.com>
Source record: 46031

Anyone got any info on vacuum tube 6204 ? I can't find anything on it (I have 6 tube
manuals and the numbers all skirt around this one). A surplus place here has them
marked as equivalent to 6X5's.

Thanks

Phil

Posted Via Binaries.net = SPEED+RETENTION+COMPLETION = http://www.binaries.net

1691. Wanted: PS schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-28 14:17:36 UTC
From: Joe Hargis <joehargis@worldnet.att.net>
Message-ID: <4_qf8.5290$106.334059@bgtnsc05-news.ops.worldnet.att.net>
Source record: 46032

Need info/schematic on MDL 5015A variable power supply made by Power
Design Inc. of N.Y.
Unit used by McDonald Douglas for Air Force. Any help appreciated, 73 Joe
in MO

1692. Re: ts530 help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-28 14:28:26 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <3C7E3E8A.393353F9@dialpoint.net>
Source record: 46033

Try here near the bottom of the page under OTHER.

http://krasnodar.online.ru/hamradio/sch_eng.html

Jeff Jenkins wrote:
>
> I have just been given an old kenwood/trio ts-530s
> where can i
> 1 obtain/download a full instrtuction mannual
> or
> 2 basic tune up instructions
> tnx jeff gw0jkb

1693. Dan's small parts & kits ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-28 14:43:22 UTC
From: maxpowa <maxpowa@iwontellsorry.com>
Message-ID: <emrf8.209673$rt4.21295@afrodite.telenet-ops.be>
Source record: 46034

Hey,

Anybody ever bought anything from this guy ? (Dan's small parts & kits)

Was it good or bad ? fast delivery ?

How did you pay ? Did it work out OK ?

Thanks in advance,
Steven

1694. Re: Dan's small parts & kits ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-28 18:01:45 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrna7ss48.mh5.QSB@animas.frontier.net>
Source record: 46035

On Thu, 28 Feb 2002 14:43:22 GMT, maxpowa scribbled:
>
> Anybody ever bought anything from this guy ? (Dan's small parts & kits)

yep.

> Was it good or bad ? fast delivery ?

Good. 3-4 day UPS, IIRC.

> How did you pay ? Did it work out OK ?

I believe I used a check. Maybe a C.C. mox nix.

Recommended. I'd do business with him again.

73
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

1695. Re: BF981 and TBB569 datasheets ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-28 18:29:18 UTC
From: davidwrigley <davidwrigley@ntlworld.com>
Message-ID: <ZXwf8.24356$Hg1.3352478@news6-win.server.ntlworld.com>
Source record: 46039

Hi Yannick

Data on BF981 sent direct as an attachment

David
G6GXK

Yannick <mail@f5iko.com> wrote in message
news:99e2cce8.0202261112.3c25f3b3@posting.google.com...
> Hi dear OMs,
>
> I'm looking for BF981 fet and TBB569 FM receiver datasheets.
> Can you help me?
>
> Many thanks and best 73' de Yannick.....F5IKO

1696. Re: Dan's small parts & kits ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-28 18:38:58 UTC
From: mikea@mikea.ath.cx
Message-ID: <6Puf8.14990$345.1960207415@newssvr17.news.prodigy.com>
Source record: 46036

Allodoxaphobia <QSB@qrm-qrn.net> wrote:
: On Thu, 28 Feb 2002 14:43:22 GMT, maxpowa scribbled:
:>
:> Anybody ever bought anything from this guy ? (Dan's small parts & kits)

: yep.

:> Was it good or bad ? fast delivery ?

: Good. 3-4 day UPS, IIRC.

:> How did you pay ? Did it work out OK ?

: I believe I used a check. Maybe a C.C. mox nix.

: Recommended. I'd do business with him again.

What he said, exactly. Good. Fast. Check. Got _exactly_ what
I had ordered.

--
"With M$, as far as I'm aware, the stupidity comes bundled with
the software."
-- Meg Thornton, in the Monastery

1697. Re: Dan's small parts & kits ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-28 18:52:43 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u7sv52ta9t7l50@corp.supernews.com>
Source record: 46037

Sounds impossible to me.

Good, yes, fast, no.

Dan's only takes orders by snail mail so it seem to me it's always a 2 week wait. I've ordered from him maybe a half dozen times, and never been disappointed, but it always takes a while for the pony express.

OTOH, he has good stuff, outstanding prices, and for a lot of what he has, there's nowhere else to get it.

..

"Mike Andrews" <mikea@mikea.ath.cx> wrote in message news:6Puf8.14990$345.1960207415@newssvr17.news.prodigy.com...
> Allodoxaphobia <QSB@qrm-qrn.net> wrote:
> : On Thu, 28 Feb 2002 14:43:22 GMT, maxpowa scribbled:
> :>
> :> Anybody ever bought anything from this guy ? (Dan's small parts & kits)
> >
> : yep.
> >
> :> Was it good or bad ? fast delivery ?
> >
> : Good. 3-4 day UPS, IIRC.
> >
> :> How did you pay ? Did it work out OK ?
> >
> : I believe I used a check. Maybe a C.C. mox nix.
> >
> : Recommended. I'd do business with him again.
> >
> What he said, exactly. Good. Fast. Check. Got _exactly_ what
> I had ordered.
> >
> --
> "With M$, as far as I'm aware, the stupidity comes bundled with
> the software."
> -- Meg Thornton, in the Monastery

1698. Do you have a sick Radio or Amplifier?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-28 22:31:56 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3C7EAFDC.687DF870@charter.net>
Source record: 46040

Specialize in Older Tube type rigs and Amplifiers of all kinds Tubed,
Transistor, and Ceramic.
http://www.angelfire.com/nb/ni4l/

--

NI4L CUSTOM RESONANT DIPOLE
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Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... <http://www.angelfire.com/nb/ni4l/>

1699. FA: Tektronix 495P spectrum analyzer w/manuals, excellent condition

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-02-28 23:05:31 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C7EB779.14EB@pop.removethistomailme.net>
Source record: 46041
Cross-posted to:
rec.radio.amateur.homebrew,rec.radio.amateur.equipment,misc.industry.electronics.marketplace,sci.electronics.equipment

This unit covers 100 Hz-1.8 GHz, includes a built-in signal counter with
1E-9/day timebase, and is guaranteed fully operational. Great for IMD
measurement, harmonic and spur evaluation, FCC pre-submission testing,
synthesizer noise characterization, and impressing visitors to your lab
or ham shack.

No reserve, starting bid $1.00.

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1709834856

-- jm

---

http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1700. Re: Fuse-type light bulb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 00:06:51 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <b78r7uo369e12kdfr1b638o340jjedemn7@4ax.com>
Source record: 46042

-Your Friend Bill- <none@coqui.net> wrote:

>At any rate, yes, the lamps are a sealed glass thingie and the tips are
>simply soldered on. Methinks you could either build up the flat ends
>with solder or maybe even remove the tip ends from your burnt out lamps
>and solder them on to the new ones.

Hmmm, I hadn't thought of the latter option.

thanks,

-

Jim Adney jadney@vwtype3.org
Madison,Wisconsin USA

1701. Re: Homebrew Vacuum Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 00:06:51 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <cd8r7uoo5vh62b2akil5o67i3ldvjci88e@4ax.com>
Source record: 46043

"Geoffrey G. Rochat" <geoff777@777pkworks.com> wrote:

>One H. P. Friedrichs has been building his own hobbyist tubes and
>transistors for some time now. Unfortunately, all the on-line links I
>have to his work are broken.

Did anyone else notice the potential humor in this? ;-)

-

Jim Adney jadney@vwtype3.org
Madison,Wisconsin USA

1702. Re: Homebrew Vacuum Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 00:17:55 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3C7EC8B3.5CBBBFFB@ieee.org>
Source record: 46045

Dick wrote:

> In article <3c7defee.19741776@news.clix.pt>, Bill Meara <n2cqr@clix.pt>
> writes
> >I remember hearing about guys who were working on homebrew point
> >contact devices. When you think about it, the galena--cats whisker
> >detectors were homebrew solid state diodes.
> >
> I seem to remember some articles in a UK publication (Practical
> Wireless or Wireless World ?) in the early days of transistors about how to
> make your own point contact transistors. It's a wee while ago but from what I
> can recall it involved breaking open (carefully) Ge point contact diodes and
> combining the piece of Ge with 2 point contact whiskers, think they got
> some gain out of it but don't know what the frequency performance was like
> - but in those days an Ft of 300 kc/s (well that's what it was in those days !!)
> was an HF transistor !
>
> If anyone is thinking about making their own valves/tubes suggest
> they get a copy of either Gerald F.J. Tyne (ex-8KN) Saga of the Vacuum
> Tube (reprint publ. Antique Electronic Supply, Temple AZ) or V.J. Phillips
> Early Radio Wave Detectors (The Science Museum in assoc. with Peter
> Peregrinus Ltd., London ISBN: 0 906048 24 9). The early valves/tubes were
> very crude, simple devices and should be quite easy to duplicate provided
> you're not looking for repeatable characteristics !!
>
> Must go and have a cold shower, I'm beginning to fantasise about
> memories of darkened shacks and faint blue glows to be seen inside 813s
> mounted on open chassis in 19" racks ....
> --
> Dick
> GM0MNL

I think the diodes that were used were 1N21 (or 1N23), as these were/are point contact diodes.

I think the blue glow was the 816 rectifiers. If the 813 showed blue you had gassy tubes. :-)

Bill K7NOM

1703. Re: Dan's small parts & kits ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 00:24:42 UTC
From: Mark Hall <vze2mhvc@bellatlantic.net>
Message-ID: <3C7EC92C.66AB954D@bellatlantic.net>
Source record: 46044

Thanks for the tip! Dan's got some super stuff at almost rediculous
prices...

'73 KI4Z

maxpowa wrote:

> Hey,
>
> Anybody ever bought anything from this guy ? (Dan's small parts & kits)
>
> Was it good or bad ? fast delivery ?
>
> How did you pay ? Did it work out OK ?
>
> Thanks in advance,
> Steven

1704. Re: Keying older amp with late equipment

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 00:38:30 UTC
From: dbagley@mindspring.com
Message-ID: <a5mmb7$e6o$1@slb4.atl.mindspring.net>
Source record: 45947

I key my sb200 with a opto relay and it is interfaced to my heath sb 1400 hf rig,
I too was concerned about the 1 amp rating of my rig so i built the opto unit and it's great!

"A ccrider3" <accrider3@aol.comnojunque> wrote in message news:20020224150752.26907.00000489@mb-ma.aol.com...
> Hi,
> I just purchased a Kenwood TS-2000 and am wondering the best way to key an
> SB-200/220 with the transciever. My old rig was TS-830S and this wasn't an
> issue. Searches on the web have been inconclusive. I am wondering if solid
> state is the way to go or just KISS and use a low milliamp coil 12V relay. Any
> help would be appreciated.
> 73 de Dale
> KG4KZG
>

1705. Stock Up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 01:34:13 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <kNAf8.1239$K%4.294703@news1.iquest.net>
Source record: 46046
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Hey gang...I found a great deal on PN2222A's today.

I had to buy the whole lot though to get the price.

I have 9000 to sell.

500 for $20 or 1000 for $35

Now is the time to stock up.

Add $3.50 for shipping in the USA

I will ship to non-USA addresses. Just send me an email and I'll figure out
the shipping for you.

--

==========
KB9BVN/QRP - New Whiteland IN - EM69WN
QRP-ARCI #10223 QRP-L #1540 FIST #5695
FISTS CC #764 - Proud Member ARRL
HEATH HW-9 @ 2W or NORCAL 40A @ 1.3W
INTO INFAMOUS AF4PS ATTIC DIPOLE
SOC #400 AND FLYING PIGS QRP #-57
==========

1706. Manual list

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 01:36:35 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C7EDB23.5D73BEB@ieee.org>
Source record: 45948

Please send it along.

Clyde
KA1CRV

1707. Re: Keying older amp with late equipment

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 02:07:49 UTC
From: n7ws@yahoo.com
Message-ID: <3c7ee138.204354187@news.triconet.org>
Source record: 45949

On 24 Feb 2002 20:07:52 GMT, accrider3@aol.comnojunque (A ccrider3) wrote:

|Hi,
|I just purchased a Kenwood TS-2000 and am wondering the best way to key an
|SB-200/220 with the transciever. My old rig was TS-830S and this wasn't an
|issue. Searches on the web have been inconclusive. I am wondering if solid
|state is the way to go or just KISS and use a low milliamp coil 12V relay. Any
|help would be appreciated.
|73 de Dale
|KG4KZG

I worried about this too with my TS870 and Drake L4B. I used a power fet (IRF510 available at Radio Shack) to key the relay. I use the +12V available from the radio (on transmit) to drive the fet gate thru a resistive divider that lowers the 12V to 4V which is enough to switch the fet.

As I recall your SB220 has over 100 V on the relay so you might need a higher voltage fet if you try this scheme.

Wes Stewart N7WS

1708. Re: Help Rect/reg ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 04:12:23 UTC
From: mcalhoun@ksu.edu
Message-ID: <a5mv37$4v8@unix1.cc.ksu.edu>
Source record: 45950

>>>>the stator has 2 leads that i assume go to a bridge input in the rect/reg...
>>>>there is one lead that goes to the battery...
>>>>no feedback!
>>>>the rotor is the flywheel with some permanent magnets imbedded..
>>>>like i mentioned earlier the output is about 30 vac at max rpm..

>To be fair, I have no idea how a magneto based charging system might
>work, unless it just, as someone else suggested, uses a simple shunt
>regulator.

For many years I used a "Windcharger" generator to run my hamshack, and
the only way I could keep that think from overcharging my battery on a
really windy day was via a shunt regulator. I used two big transistors
which "dumped" excess current into a couple of one-ohm 100-watt resistors.
Worked really well.

Unfortunately, after about 15 years, the trees near my tower grew higher
than the tower and pretty-well took the wind out of my sails, so to speak!

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

1709. WTB 30KV Hi E wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 04:51:25 UTC
From: Paul Cooper <plcooper@starband.net>
Message-ID: <3C7F091D.6020606@starband.net>
Source record: 45951

WTB 2 lengths of 30KV Hi Voltage wire with surface smooth (nylon). One length in red and one in black. Both lengths to be around 50 feet.

Paul, K6PY

1710. NEED TUNED INPUT CIRCUT SCHEMATIC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 09:40:42 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3C7F4C9A.362D473@charter.net>
Source record: 45952

Hi
anyone have a schematic for a tuned input board. with the values of componets....i'm making a 10-80 solid state amp that i want to work on all bands .would gladly pay postage and copy fees
thanks
chris NI4L

--

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1711. Sound Card Programming

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 10:02:35 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.0000006e.003cbfa8@btinternet.com>
Source record: 45953

Hello,

I wonder if anyone has any pointers to sites, books, source code listings, etc., on the subject of sound card programming. I am thinking of starting a spectrum analyzer project (half software, half hardware based) and wonder if the sound card might be a more convenient port to my PC rather than the usual USB/parallel/serial way in, as well as being a useful DSP resource.

Any help would be appreciated. I have already started a web search but am unlikely to find every nook and cranny. The existence of top grade software like "MMTTY" tell me that the info must be out there somewhere.

73 de G3LLV, Joe

1712. Re: Dan's small parts & kits ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 11:15:49 UTC
From: maxpowa <maxpowa@iwontellsorry.com>
Message-ID: <FpJf8.212928$rt4.21700@afrodite.telenet-ops.be>
Source record: 45954

Thanks guys, seems dan's is the way to go, doesn't matter if i have to wait 2 weeks, with the stuff he's selling, I'm willing to wait :)

Steven

1713. Re: ts530 help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 11:21:08 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3C7F6424.6771D384@bloomer.net>
Source record: 45955

Try Kenwood's FTP site (Here's the address if you're in the USA):

ftp://216.133.82.101/Amateur/Older%20Instruction%20Manuals/readme.htm

If outside the USA, start at Kenwood's amateur products page at:

http://www.kenwood.net/ama_page.cfm

73,
Scott N0EDV

Jeff Jenkins wrote:
>
> I have just been given an old kenwood/trio ts-530s
> where can i
> 1 obtain/download a full instrtuction mannual
> or
> 2 basic tune up instructions
> tnx jeff gw0jkb

--
Scott
http://corbenflyer.tripod.com/
Building RV-4
Gotta Fly or Gonna Die!

1714. Re: Sound Card Programming

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 11:32:14 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <uron5a.lm1.ln@my.linux.box>
Source record: 45956

In article <VA.0000006e.003cbfa8@btinternet.com>, Joe McElvenney wrote:
> Hello,
>
> I wonder if anyone has any pointers to sites, books,
> source code listings, etc., on the subject of sound card
> programming. I am thinking of starting a spectrum analyzer
> project (half software, half hardware based) and wonder if
> the sound card might be a more convenient port to my PC
> rather than the usual USB/parallel/serial way in, as well
> as being a useful DSP resource.
>
> Any help would be appreciated. I have already started a
> web search but am unlikely to find every nook and cranny.
> The existence of top grade software like "MMTTY" tell me
> that the info must be out there somewhere.
>
>
> 73 de G3LLV, Joe

Our usual Linux advocate is probably still asleep.

Have a look at some of the open-source DSP software
for Linux and the other NIX's.

My favourite is XAnalyser by Arvin Schnell.

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

1715. ATV Down converter for 1.2 Gig

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 15:18:16 UTC
From: edgrimly@hotmail.com
Message-ID: <bfc05d2.0203010718.79a82fb3@posting.google.com>
Source record: 45957

I am looking for plans on how to build a 1.2 Gig ATV down converter.
We have a local ATV Repeater that outputs on this freq and I cannot
get in on the fun until I get a down converter.

Thanks

Ed

1716. Re: Sound Card Programming

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 15:39:36 UTC
From: deyoreo@re.ray.com
Message-ID: <3c7fa070.11752765@proxy.res.ray.com>
Source record: 45958

This site will show how to use C++ to use the soundcard to fill a
buffer. From there, you'll need an FFT and a plot routine. I've got
them in C++ if you want.
On Fri, 1 Mar 2002 10:02:35 +0000 (UTC), Joe McElvenney
<ximac@btinternet.com> wrote:

>Hello,
>
> I wonder if anyone has any pointers to sites, books,
>source code listings, etc., on the subject of sound card
>programming. I am thinking of starting a spectrum analyzer
>project (half software, half hardware based) and wonder if
>the sound card might be a more convenient port to my PC
>rather than the usual USB/parallel/serial way in, as well
>as being a useful DSP resource.
>
> Any help would be appreciated. I have already started a
>web search but am unlikely to find every nook and cranny.
>The existence of top grade software like "MMTTY" tell me
>that the info must be out there somewhere.
>
>
> 73 de G3LLV, Joe
>
>

1717. Re: Sound Card Programming

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 15:57:49 UTC
From: mikea@mikea.ath.cx
Message-ID: <1yNf8.15709$4N3.2052418766@newssvr17.news.prodigy.com>
Source record: 45959

Which "this site"?

deyoreo@re.ray.com wrote:
: This site will show how to use C++ to use the soundcard to fill a
: buffer. From there, you'll need an FFT and a plot routine. I've got
: them in C++ if you want.
: On Fri, 1 Mar 2002 10:02:35 +0000 (UTC), Joe McElvenney
: <ximac@btinternet.com> wrote:

--
I had occasion to write today, "Best viewed through the bottom of a
beerglass" about a website that had another one of those binary
Windows-only plugins.
Paul Martin, in the Monastery

1718. Re: Akron OH Junque Emporiums?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 16:18:56 UTC
From: wb3fup@webtv.net
Message-ID: <1617-3C7FA9F0-320@storefull-108.iap.bryant.webtv.net>
Source record: 45960

Akron OH Junque Emporiums?

Group: rec.radio.amateur.homebrew Date: Sat, Feb 23, 2002, 2:56pm (EST+5) From: not@aol.com (BFHawkins)
Hi Group!
Does anyone know of any fun electonics junque/surplus places to visit in the Akron OH area.
TIA to all who respond.
Best regards,
BFHawkins

Fair Radio Sales in in Ohio, I am not sure how close to Akron, but friends who go to Dayton annually make sure they stop at Fair. It is the High Holy of Junque for radio amateurs. Every thing from Antenna kits to communication Vans ment to be mounted on 6x6's for field deployment.

73 es cul

wb3fup
a salty bear

1719. Re: Visual Basic and Sound Cards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 16:32:28 UTC
From: wb3fup@webtv.net
Message-ID: <1617-3C7FAD1C-322@storefull-108.iap.bryant.webtv.net>
Source record: 45961

Jim
To be playing in Office (Excel) you have to use VBA (Visual Basic for Applications). It is the usual conundrum of computeing, it is the same thing as VB but vastly different. If Bill and his magic crew did not concieve of the fact that anyone ever wud ever want to do what you want to it probably can't be done.

VB will let you access the sound card - you say and I believe you - but VBA may not. And VBA is the language that is used to automate, and custom design user applications based on Office applications.

73 es cul

wb3fup
a salty bear

1720. Re: Visual Basic and Sound Cards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 16:41:09 UTC
From: wb3fup@webtv.net
Message-ID: <1617-3C7FAF25-325@storefull-108.iap.bryant.webtv.net>
Source record: 45963

Re: Visual Basic and Sound Cards

Group: rec.radio.amateur.homebrew Date: Thu, Feb 21, 2002, 10:19am (EST-3) From: jim.bolinger@lintek.aeroflex.com (JLB)
Don't mean to get testy here, but my question was about using ***Visual Basic*** from ***inside Excel***, not C++!!!
Since I said that I have seen how to use the sound card, and how to write Excel macros, it follows that I **have** done a web search. And I have seen the site in the link.

OK don't get testy. Unless you are using a version of Excel prior to 4.0 "macros" do not exist. Your "Macro Recorder" builds a script in "VBA". I have written a multi-sheet Excell based application that captures keystoke information, and builds a mainframe upload file, that interfaces w/ legacy equipment, the programing of which originally expected input on 80 column punch cards' Did not use a line of Visual Basic. Could not. Many lines of Visual Basic for Applocations later the program worked as desired. If you want to be in Excel when your sound card is talking to you, you are going to have to use VBA. Don't let how similar they look fool you, they are not the same. You may or may not be able to make the calls you want.

73 es cul

wb3fup
a salty bear

1721. Re: FS: EPROM eraser, and PIC chips

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 16:45:26 UTC
From: wb3fup@webtv.net
Message-ID: <1618-3C7FB026-145@storefull-108.iap.bryant.webtv.net>
Source record: 45962

Another Mike Hall heard from

73 es cul

wb3fup
a salty bear

1722. Re: WTB 30KV Hi E wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 19:54:44 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C7FDDA1.58FE@pop.removethistomailme.net>
Source record: 45964

Paul Cooper wrote:
>
> WTB 2 lengths of 30KV Hi Voltage wire with surface smooth (nylon). One
> length in red and one in black. Both lengths to be around 50 feet.
>
> Paul, K6PY

Auto parts store? Mallory 8mm copper-core ignition wire would be
suitable for 30KV, although I'm not sure what you mean by "surface
smooth."

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1723. UK Component Suppliers List

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 20:08:19 UTC
From: geoffrey brown <geoff@spontaflex.freeserve.co.uk>
Message-ID: <a5on5q$ur5$1@news6.svr.pol.co.uk>
Source record: 45965
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

I'm posting a list of UK component suppliers

on my website http://www.spontaflex.freeserve.co.uk/

to assist anyone contemplating constructing any

of Sir douglas Halls circuits.

this is what I have so far

Harrison Electronics.... http://website.lineone.net/~harrison.elec/

Bowood Electronics..... http://www.bowood-electronics.co.uk/

Marshalls.............. http://www.cricklewoodelectronics.com/

J.A.Crew............... http://www.jacrew.com/

N.R.Bardwell........... http://www.bardwells.co.uk/

Electrovalue........... http://www.electrovalue.com/

Maplin................. http://www.maplin.co.uk/

If you know of any others please post details

Can't find site for Birkitts of Lincoln are they still in business?

Thanks in advance

Geoff

1724. Re: Dan's small parts & kits ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 20:42:37 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C7FE7BD.39715A6D@clifto.com>
Source record: 45966

maxpowa wrote:
> Anybody ever bought anything from this guy ? (Dan's small parts & kits)
>
> Was it good or bad ? fast delivery ?
>
> How did you pay ? Did it work out OK ?

I was pleased. Paid by check, delivery didn't take long. One substitution
was made; the diodes supplied exceeded the ratings of the ones ordered.
I'll buy from him again.

--
Britney Spears' Guide to Semiconductor Physics
<http://britneyspears.ac/lasers.htm>

1725. Re: UK Component Suppliers List

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 21:32:01 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <a5os0ghvh1@knossos.btinternet.com>
Source record: 45967
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"geoffrey brown" <geoff@spontaflex.freeserve.co.uk> wrote in message
news:a5on5q$ur5$1@news6.svr.pol.co.uk...
> I'm posting a list of UK component suppliers
>
> on my website http://www.spontaflex.freeserve.co.uk/
>
> to assist anyone contemplating constructing any
>
> of Sir douglas Halls circuits.
>
> this is what I have so far
>
> Harrison Electronics.... http://website.lineone.net/~harrison.elec/
>
> Bowood Electronics..... http://www.bowood-electronics.co.uk/
>
> Marshalls.............. http://www.cricklewoodelectronics.com/
>
> J.A.Crew............... http://www.jacrew.com/
>
> N.R.Bardwell........... http://www.bardwells.co.uk/
>
> Electrovalue........... http://www.electrovalue.com/
>
> Maplin................. http://www.maplin.co.uk/
>
> If you know of any others please post details
>
> Can't find site for Birkitts of Lincoln are they still in business?
>

Birketts are still in business, but don't have a web site.

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.con
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

1726. Re: QRP kits/homebrews

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 22:17:28 UTC
From: Peter Parker <parkerp@alphalink.com.au>
Message-ID: <3c7ffe90@news.alphalink.com.au>
Source record: 45968

Detailed information on what band, mode and type of rig is best for QRP
appears at http://www.alphalink.com.au/~parkerp/qrp.htm

Peter VK3YE

"Checkered Demon" <oh_beer_thirty@hotmail.com> wrote in message
news:elob8.307$mG7.170685731@newssvr21.news.prodigy.com...
> I am planning on passing my General test in a couple of weeks. Started
> dreaming of QRP transceivers for trips to the mountains. I have lots of
> questions. The size of the rig is not important. It should be on the
higher
> end in the power department. i.e.. 5W is better than 350 mW . Battery
life
> is not that important either.
>
> 1) What band or bands are best for DXing with a QRP rig?
> 2) What type of antenna? Long wire di-pole is OK.
> 3) Most of the kits I have seen are of "older" design. Are these still ok
> or are there newer designs that I have not seen yet? Are there good
designs
> in the books and magazines that are not yet kits ? Where should I look?
> 4) Of the kits that are out there, is one better than the other?
> 5) Is there a QRP rig that is good enough to double in the home shack?
> 6) Is there a QRP newsgroup?
>
> Thanks in advance for any help that you may give.
>
>
> Pete
> KG6GRZ
>
>
>

1727. Re: NEED TUNED INPUT CIRCUT SCHEMATIC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 22:32:42 UTC
From: la8ak.xnd@online.no
Message-ID: <3c7fe3c8.1040492@news.online.no>
Source record: 45969

On Fri, 01 Mar 2002 04:40:42 -0500, NI4L <ni4l@charter.net> wrote:

>Hi
>anyone have a schematic for a tuned input board. with the values of
>componets....i'm making a 10-80 solid state amp that i want to work on
>all bands .would gladly pay postage and copy fees
>thanks
>chris NI4L
>
suppose it is an input board for Linear amplifier?

--
remove ,xnd to reply

1728. Re: UK Component Suppliers List

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 22:34:41 UTC
From: RVMJ <RVMJ@Safety-&-Arming.Clara.co.uk>
Message-ID: <q9008uo1phluvcre7412dv11plbtn5eken@4ax.com>
Source record: 45970
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

geoffrey brown wrote:

>I'm posting a list of UK component suppliers
>
>on my website http://www.spontaflex.freeserve.co.uk/
>
>to assist anyone contemplating constructing any
>
>of Sir douglas Halls circuits.

This could be the start of a FAQ as far as uk.r.a is concerned; after
all this sort of Q is asked fairly regularly. A "G5RV" section might
also help to dispose of the myths surrounding this amtenna.....

--
from
RVMJ
Remove Safety-&-Arming before e-mailing

1729. Re: 10.7 Mhz IF and HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 22:53:10 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <qDTf8.7382$gK2.533131@bgtnsc04-news.ops.worldnet.att.net>
Source record: 45971

I've been using a 10.7MHz 1st I.F. for some of my receivers, and as long as I use a doubly-balanced diode mixer, the spur at 10.7MHz is right around .25uV. When an antenna is connected to the receiver, the spur is masked in the antenna noise.
Now, what Mr. Black did say was correct, especially with some of the older mixer designs. If this approach was attempted with some of the older topologies, there would be a very high level spur at the I.F. That is one big reason that the Hallicrafters SX122, and some of their other receivers with that 1650KHz 1st I.F. omitted that range just above the MW band. The Drake '4 series was another example of this omission, except in this case, it was in the 5.465KHz range.
If you run a spur simulation, you do see the benefits from using a higher I.F.; much fewer inband spurs. For anybody interested in seeing what I've done with a successful implementation of a 10.7MHz 1st I.F., feel free to contact me.

Pete KE9OA
Chicago, Il.

Michael Black <blackm00@cam.org> wrote in message
news:6447bcd3.0202231448.1eb5374e@posting.google.com...
> paul@paulrowe.com (Paul Rowe) wrote in message
news:<bbd01c1e.0202231020.45d18000@posting.google.com>...
> > Dumb Question: Is it bad to use a 10.7 Mhz IF for a HF receiver?
> > What are the pros and cons compared to 455Khz ? Any response
> > appreciated. Thanks.
> >
> > paul@paulrowe.com
>
> At this point in time, I think you'd rather go with an IF in
> the MHz range, unless there was a specific reason not to. Remember,
> that 455KHz IFs date from when it was easier to go low in frequency
> to get the required bandwidth, and when crystal filters in the HF range
> came along, they gave the needed bandwidth. And you benefitted from
> much better image rejection. If you read reviews of low end shortwave
> receivers from the sixties, they'll often note very low image rejection
> on the highest band. Going to an HF range IF means you don't have
> to put a lot of effort into the front end in order to reduce the image
> sufficiently.
>
> Some people will say that a Collins mechanical filter which would be
> at 455Khz or 500KHz, are a better choice than a crystal filter. But
> at this point in time, you'd want to go with a double conversion scheme,
> which is what's happening in commercial receivers that still use 455KHz
> IFs. In those, the low IFs are often for some extra feature, like

> passband tuning, where the added conversion is already needed.
> (Note that most consumer AM broadcast band receivers and low end
> Shortwave receivers still use 455KHz IFs, and one can assume that
> it's due to reasons of economics. Certainly enough time has been put
> into designing AM BCB receivers, so they know how to work around the
> image problem, and 455KHz is such a common IF that ceramic filters
> are plentiful for AM-bandwidth.)
>
> One significant problem of an IF in the HF range is that if the receiver
> is general coverage, you'll have a hole in the coverage. You're going
> to have problems with reception right around the IF. But if you are
> only covering some segments of the HF range, such as the hambands,
> then an HF range IF gives you better image rejection, and an easier
> design.
>
> Nowadays, a lot of receivers have the first IF above the HF range, so
> there isn't that hole in the tuning range. Of course, these tend to
> be general coverage receivers. The disadvantage is that you need
> a much higher local oscillator frequency for that first mixer,
> and so there'll be complication there.
>
> Unless you are just using the 10.7MHz IF as a first IF, and a second
> conversion to some other frequency for ultimate selectivity, you might
> want to reconsider the frequency. I don't think there is a wide selection
> of filters on that center frequency. Most common, you'll find
> FM-bandwidth filters, which would only be useful for FM. Certainly
> you're more likely to find AM, SSB and CW bandwidth filters at
> 9Mhz than 10.7.
>
> (And they are likely to be expensive, unless you can find surplus
> filters. That is an advantage of 455KHz (or the similarly
> used 450KHz); you can probably scrounge up a number of filters for
> less than doing the same in the HF range. Certainly AM-bandwidth
> filters are easy to come by, and I think you can find narrower filters
> in CB sets. For a good CW or SSB filter, you could find a used mechanical
> filter. So the choice of IF may depend on whether you can get by with
> one filter, or need different bandwidths.)
>
> A lot of people seem to be building their own ladder filters, which
> seem to be easier to build than the old lattice filters from the early
> days of SSB. Since they depend on a good number of cheap crystals,
> the IF frequency is chosen because the crystals are available. For
> a ham band receiver, the exact IF frequency won't matter so long
> as it's not in a ham band, and you do some calculations to make sure
> don't end up with some weird response when the IF and local oscillator
> mix together.
>
> Michael VE2BVW

1730. Re: WTB 30KV Hi E wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-01 23:42:49 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <4%7g8.81040$Ah1.10725845@news2-win.server.ntlworld.com>
Source record: 45994

> > WTB 2 lengths of 30KV Hi Voltage wire with surface smooth (nylon). One
> > length in red and one in black. Both lengths to be around 50 feet.
>
> Auto parts store? Mallory 8mm copper-core ignition wire would be
> suitable for 30KV, although I'm not sure what you mean by "surface
> smooth ?
==========
Do you mean the insulated wire used for EHV in Monitors and TV sets?
It is single strand wire (tinned copper) with 2 different layers of
insulation , the outer one being smooth.
I have also a short length with multi-strand wire , both type suitable for
up to 1 Ampere
I found a length of a couple of metres at a flea market for use in a valve
linear amplifier, but the 2 x 50ft length you require will probably only be
available from a specialist wire/cable supplier .
If you know a monitor /TV set production or repair facility ,perhaps you can
get the required info from this type of source.

Good luck

Frank gm0csz.kn6wh@ntlworld.com

1731. Re: UK Component Suppliers List

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 00:04:59 UTC
From: Acars <acars83@hotmail.com>
Message-ID: <GGUf8.29803$Hg1.4629188@news6-win.server.ntlworld.com>
Source record: 45972
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Hi Geoff.
Yes Birkitts of Lincoln are still in Business,i call in there
every couple of Months,John the Founder is still
in the Shop most Days and also attends quite a few of the Rally's,a real
Radio Shop i call Birkitts,oh nearly forgot
re the Web page for Birkitts no they dont have a Web Page.
Cheers,
Terry.
geoffrey brown <geoff@spontaflex.freeserve.co.uk> wrote in message
news:a5on5q$ur5$1@news6.svr.pol.co.uk...
> I'm posting a list of UK component suppliers
>
> on my website http://www.spontaflex.freeserve.co.uk/
>
> to assist anyone contemplating constructing any
>
> of Sir douglas Halls circuits.
>
> this is what I have so far
>
> Harrison Electronics.... http://website.lineone.net/~harrison.elec/
>
> Bowood Electronics..... http://www.bowood-electronics.co.uk/
>
> Marshalls.............. http://www.cricklewoodelectronics.com/
>
> J.A.Crew............... http://www.jacrew.com/
>
> N.R.Bardwell........... http://www.bardwells.co.uk/
>
> Electrovalue........... http://www.electrovalue.com/
>
> Maplin................. http://www.maplin.co.uk/
>
> If you know of any others please post details
>
> Can't find site for Birkitts of Lincoln are they still in business?
>
> Thanks in advance
>
> Geoff
>
>

1732. MM5314 Clock Chip data sheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 00:59:46 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C802402.EB2AF17E@ieee.org>
Source record: 45973

Hello,

My station clock that I built from a kit in 1975? has the National MM5314 chip in it. I have an extra chip and am thinking about a new clock.

Does anyone here have a data sheet?

Of course, I'd pay reasonable copy/shipping charges.

Clyde

KA1CRV

1733. Super Regen (colpitts)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 01:38:43 UTC
From: Macgman <macgyver9@iname.com>
Message-ID: <D2Wf8.4676$va.587@nwrddc02.gnilink.net>
Source record: 45974

Hello all,

I have been looking for information on Super Regenerative receivers and have had no luck. All I seem to find is semi-complete cookbook examples nothing really comprehensive (mostly tube stuff). I am looking for a solid state Colpiits based J-FET or BJT design, it would be great if data and an explanation of what is going on in the circuit would accompany the schematic. I am looking for somthing in the VHF/UHF band, preferrably UHF but VHF is just as good for starters. I would appreciate any help you can give me, please send responses to rfmac2000@yahoo.com

Thanks!!!

Best Regards,
Nick
KC6SDF

1734. Re: UK Component Suppliers List

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 01:51:42 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3c8033b6_1@news1.prserv.net>
Source record: 45975
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Question from the colonies: How about this RS outfit? I saw one of their catalogs a couple of years ago, are they still in business? (Not Radio Shack or Tandy, I think they use there.)

--
Crazy George
Remove NO and SPAM from return address

1735. Re: ARRL again affirms eQSL Cards -OK- for DXCC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 01:58:49 UTC
From: Ronald Oberloh <wa0kds@yahoo.com>
Message-ID: <3C8031D8.F66E004A@yahoo.com>
Source record: 45976
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

Think you are wrong on this one but that is your choose.

Jim Higgins wrote:

> On Wed, 27 Feb 2002 16:37:04 -0700, in
> <3C7D6D9F.41F65113@yahoo.com>, Ronald Oberloh <wa0kds@yahoo.com>
> wrote:
>
> >Jim Higgins wrote:
> >>
> >> On Sat, 23 Feb 2002 14:46:18 -0700, in
> >> <3c780dab$1@news.bnb-lp.com>, "Charles Johnston"
> >> <ctj92@cableone.net> wrote:
> >>
> >>>The ARRL has recently reaffirmed just one week after the
> >>>original historic announcement (08-Feb-2002) that eQSL
> >>>Cards - ARE - accepted for DXCC.... this remark from the
> >>>eQSL Webmaster found at this URL:
> >>> http://www.eqsl.cc/qslcard/comments.cfm
> >>>"ARRL reaffirmed today that it will accept eQSLs that are
> >>>mailed. AG or not" (Webmaster) 15-Feb-2002
> >>
> >> Charles,
> >>
> >> The eQSL Webmaster is incorrect. His statement is based on a
> >> misunderstanding of the response received from ARRL.
> >>
> >> The ARRL response, available at the eQSL site if you look for it
> >> follows:
> >>
> >> ==== Begin ARRL Email ====
> >>
> >> From: Moore, Bill, NC1L [mailto:bmoore@arrl.org]
> >> Sent: Friday, February 08, 2002 12:31 PM
> >> To: 'Richard B. Drake'
> >> Cc: DXCC
> >> Subject: RE: Professionally Printed and mailed eQSL's
> >>
> >> Hi Rich: Something does not sound right here. You are saying that
> >> Dave is physically mailing out QSL cards by the US postal system?
> >> This is news to me.
> >>
> >> If you are my QSL manager and I send you my logs by e-mail, I am

> >> sending them direct from point A to point B. Just as if I was
> >> sending them to you by regular mail. This is OK. I remember
> >> somewhere several years ago that some people used to get their
> >> logs over the air on RTTY and another digital mode (AMTOR I
> >> think). Not a problem.
> >>
> >> However, if as the result of a log being sent to E-QSL, someone
> >> goes in and receives a card electronically and uses it for DXCC,
> >> that e-QSL cannot be accepted for DXCC credit under rule 2. I
> >> spent a bit of time with a simple shareware program to prove the
> >> unreliability of that method.
> >>
> >> However, if Dave, acting as QSL manager with station logs
> >> completes a card (even one from his printer) and sends it by mail
> >> to you, this is an acceptable exchange and we have see this often
> >> for several years now. (assuming he phyiscally checks the log).
> >> Many people use self-made cards from their printer. Each one is
> >> evaluated on a case by case basis, and many times under Section
> >> IV rule 4(b) we have conducted an audit to insure the vaildity of
> >> a card like this.
> >>
> >> In cases like this it would be REAL nice if they used a stamp or
> >> placed their initials or signature on it, but this is not
> >> required by the rules. However, this issue has been discussed and
> >> has been given some consideration.
> >>
> >> To clarify, if Dave is sending out cards through the US Postal
> >> System as the result of the log(s) he receives, this is OK.
> >> (This would basically be operating as QSL manager).
> >>
> >> Regards, Bill Moore NC1L
> >> DXCC Manager
> >>
> >> Note: Use of this message is authorized in discussions as long as
> >> it is used in its entirity and as long as parts are not edited
> >> out.
> >>
> >> ==== End ARRL Email ====
> >>
> >> The key to understanding what this means, which eQSL clearly does
> >> not, is found in the words "acting as QSL manager with station
> >> logs."
> >>
> >> A QSL manager receives a log from the managed station and waits
> >> for QSLs (or in the case of an operation like eQSL they would
> >> wait for individual or bulk uploaded contact information) to
> >> arrive requesting a QSL from the station he manages. He then
> >> checks the received card (contact info) vs the managed station's
> >> log to see that the contact is valid; i.e., call sign, signal
> >> report, band, mode, date and time (within a reasonable clock

> >> setting/drift error) match. If it is a valid QSO, he issues a
> >> card. If it isn't he should trash that QSL, not pass it along to
> >> the station he manages. It's an invalid QSO.
> >>
> >> eQSL does not do this. eQSL receives a log and immediately makes
> >> cards available to all stations in that log without checking the
> >> information the other station has in his log or on his QSL. This
> >> is not acting as a QSL Manager; this is just plain presumptive
> >> QSLing. It is not adequate that the receiving station look at
> >> the QSL and confirm it. How many do you think will refuse a QSL
> >> from a really rare one who put the wrong call in his log so the
> >> eQSL went to the wrong person, or if the signal reports don't
> >> match, etc? There is no independent check here, thus eQSL is not
> >> performing the duties of a QSL manager, thus the eQSLs are not
> >> accepted by ARRL.
> >>
> >> The ARRL has not changed their policy as regards acceptance of
> >> eQSLs for DXCC credit.
> >>
> >> Now, I can't speak for the ARRL, but it seems to me that some
> >> software changes by eQSL could probably overcome the objections I
> >> see.
> >>
> >> Let everyone who wants to QSL via eQSL upload their logs and let
> >> the software do the cross checking a QSL manager does. Do not
> >> show anyone any information (except what he posted himself) in
> >> any form, especially not as a QSL ready for download, until that
> >> cross check has been completed, then display cards only for QSOs
> >> that match. Now *THAT* seems to stand a chance of passing muster
> >> for acceptance for DXCC credit. Whether or not eQSL would need
> >> to print and mail a QSL at that point vs just present the card
> >> for download/printing I don't know, but eQSL is too far from that
> >> point to worry about that right now. The mechanism is already in
> >> place to print and mail if required, so that isn't a hurdle
> >> anyhow.
> >>
> >> So, as I see it, eQSL need to put the rest of the requirements
> >> met by authorized QSL managers in place. In the meantime they
> >> apparently are accepting $1 per card printed and mailed for cards
> >> that will *NOT* be accepted for DXCC credit.
>
> >Kind of confused by this one (the following). I have received many QSL's
> >from DX that I did not originate (I did not send them a card first) so what
> >makes receiving a card from a eQSL log any different than a paper one ??
>
> >>"eQSL does not do this. eQSL receives a log and immediately makes
> >>cards available to all stations in that log without checking the
> >>information the other station has in his log or on his QSL. This
> >>is not acting as a QSL Manager; this is just plain presumptive
> >>QSLing. It is not adequate that the receiving station look at

> >>the QSL and confirm it. How many do you think will refuse a QSL
> >>from a really rare one who put the wrong call in his log so the
> >>eQSL went to the wrong person, or if the signal reports don't
> >>match, etc? There is no independent check here, thus eQSL is not
> >>performing the duties of a QSL manager, thus the eQSLs are not
> >>accepted by ARRL."
>
> Can eQSL absolutely assure the identity of every station that
> uploads a log? The answer is NO! An authorized QSL manager
> KNOWS the log he gets from the station he manages comes from that
> station. There's one very major difference.
>
> >Come on people eQSL are the way it has to be done going forward
> >into the 21st Century.
>
> But not the way eQSL is doing it. The DXCC program was been
> plagued with too many cheats in years gone by - everything from
> forged cards to bought cards to DXpeditions that weren't where
> they said they were. I'm glad to see ARRL holding the line.
>
> If you want to say "Come on people," say it to eQSL. They need
> to verify all uploaders (or at least those who want to count for
> DXCC credit), then if they want to play QSL manager, they need to
> do the sort of verification that QSL managers do. Software can
> do the latter.
>
> I think too many see a cheap and easy way to get QSLs without the
> 1-year wait resulting from going via "burro" and don't look any
> farther. The eQSL model as it now exists is potentially a
> cheater's paradise, requiring time consuming double checking with
> the source of the cards as the only way to catch the cheats. I
> prefer to shift the burden to those who seem set up to profit
> from it - namely eQSL at $1 per card.
>
> Bottom line - I just explained the ARRL reasoning and clarified
> that eQSLs are NOT being accepted. I didn't make the policy.
> You and many others who read this should probably be glad that
> now you won't go out and aggressively collect eQSLs only to find
> out they really don't count for DXCC credit. If you want to be
> pissed, be pissed at those who keep saying ARRL accepts them when
> they really don't.
>
> --
> Jim Higgins, quasimodo AT yahoo DOT com
> icbm: 33.55.34N, 80.24.21W

1736. LOOKING FOR BROKE AMPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 04:00:43 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3C804E6B.1AF1677C@charter.net>
Source record: 45977
Cross-posted to: rec.radio.cb,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

I am looking for broke amplifiers transistor or tube..... good way
to clear your closet or junk room out..... Let me know what you have
.....
thanks
Chris NI4L

--

NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... <http://www.angelfire.com/nb/ni4l/>

1737. Re: UK Component Suppliers List

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 04:18:22 UTC
From: Steve Terry <g4wwk@oinospamtesco.net>
Message-ID: <SoYf8.76347$Ah1.10084707@news2-win.server.ntlworld.com>
Source record: 45978
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"geoffrey brown" <geoff@spontaflex.freeserve.co.uk> wrote in message
news:a5on5q$ur5$1@news6.svr.pol.co.uk...
> I'm posting a list of UK component suppliers
> on my website http://www.spontaflex.freeserve.co.uk/
> to assist anyone contemplating constructing any
> of Sir douglas Halls circuits.
> this is what I have so far
<snip>
>
Bonex Slough
http://217.34.228.137/startpages/content/home.htm

Steve Terry

1738. Re: LOOKING FOR BROKE AMPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 07:19:57 UTC
From: Smokin Cash <ira20@earthlink.com>
Message-ID: <x2%f8.28094$ZC3.2259999@newsread2.prod.itd.earthlink.net>
Source record: 45979
Cross-posted to: rec.radio.cb,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

Me too you got a broke 16 pill you can give me? I would pay a dollar for it!! Seeing as how all I could do with it would be sit on the coffee table as a conv. piece.

--
Slower Traffic Keep Right
"NI4L" <ni4l@charter.net> wrote in message
news:3C804E6B.1AF1677C@charter.net...
> I am looking for broke amplifiers transistor or tube........ good way
> to clear your closet or junk room out....... Let me know what you have
> .....
> thanks
> Chris NI4L
>
> --
>
> NI4L CUSTOM RESONANT DIPOLE
> LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
> Made with the same components used by our military forces today
> Custom made to YOUR FREQUENCY of operation
> Let me take the hassle out of making a RESONANT DIPOLE for you.
> Click here for more info... <http://www.angelfire.com/nb/ni4l/>
>
>
>

1739. Re: Homebrew Vacuum Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 07:23:53 UTC
From: Xslimjim71@home.com
Message-ID: <3c807c5e.4260503@news.west.cox.net>
Source record: 45980

On Thu, 28 Feb 2002 16:17:55 -0800, Bill Janssen <billj@ieee.org>
wrote:

>
>
>Dick wrote:
>
>> In article <3c7defee.19741776@news.clix.pt>, Bill Meara <n2cqr@clix.pt>
>> writes
>> >I remember hearing about guys who were working on homebrew point
>> >contact devices. When you think about it, the galena--cats whisker
>> >detectors were homebrew solid state diodes.
>> >
>> I seem to remember some articles in a UK publication (Practical
>> Wireless or Wireless World ?) in the early days of transistors about how to
>> make your own point contact transistors. It's a wee while ago but from what I
>> can recall it involved breaking open (carefully) Ge point contact diodes and
>> combining the piece of Ge with 2 point contact whiskers, think they got
>> some gain out of it but don't know what the frequency performance was like
>> - but in those days an Ft of 300 kc/s (well that's what it was in those days !!)
>> was an HF transistor !
>>
>> If anyone is thinking about making their own valves/tubes suggest
>> they get a copy of either Gerald F.J. Tyne (ex-8KN) Saga of the Vacuum
>> Tube (reprint publ. Antique Electronic Supply, Temple AZ) or V.J. Phillips
>> Early Radio Wave Detectors (The Science Museum in assoc. with Peter
>> Peregrinus Ltd., London ISBN: 0 906048 24 9). The early valves/tubes were
>> very crude, simple devices and should be quite easy to duplicate provided
>> you're not looking for repeatable characteristics !!
>>
>> Must go and have a cold shower, I'm beginning to fantasise about
>> memories of darkened shacks and faint blue glows to be seen inside 813s
>> mounted on open chassis in 19" racks ....
>> --
>> Dick
>> GM0MNL
>
>I think the diodes that were used were 1N21 (or 1N23), as these were/are point
>contact diodes.
>
>I think the blue glow was the 816 rectifiers. If the 813 showed blue you had
>gassy tubes. :-)
>
>Bill K7NOM

>
>

If you are interested in old equipment, why not try to build a tube
similar to the DeForest audion?
73's Jim, w6ivw
Delete the X before using my e-mail address. It is there to stop spam.

1740. Re: MM5314 Clock Chip data sheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 07:25:59 UTC
From: k7itm@aol.com
Message-ID: <3200347.0203012325.35996686@posting.google.com>
Source record: 45981

Hi Clyde,

Utterly wierd. I just looked up that data sheet two evenings ago,
after not having opened that book for probably five years (having
nothing to do with our recent email exchange, either!). Yes, I have
one. I can probably scan it and turn it into a .gif for you, if that
would work.

Cheers,
Tom

"Clyde R. Shappee" <cshappee@ieee.org> wrote in message
news:<3C802402.EB2AF17E@ieee.org>...
> Hello,
>
> My station clock that I built from a kit in 1975? has the National
> MM5314 chip in it. I have an extra chip and am thinking about a new
> clock.
>
> Does anyone here have a data sheet?
>
> Of course, I'd pay reasonable copy/shipping charges.
>
> Clyde
>
> KA1CRV

1741. What is cases as Homebrew?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 07:40:39 UTC
From: Jim Baxter <baxter_family@bigpond.com>
Message-ID: <R70g8.2737$wb7.10500@newsfeeds.bigpond.com>
Source record: 45982

Is a kit built transceiver a homwbrew rig?
Is there an official statement of what is and was is not homebrew?
73
VK3DBQ

PS I assembled a Heathkit HW8 QRP CW Rig which I still have many years ago!

1742. Re: Sound Card Programming

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 08:32:38 UTC
From: k9wkj <k9wkj@hotmail.com>
Message-ID: <bl4g8.370$eV4.11751@reggie.win.bright.net>
Source record: 45985

i use BAUDLINE works great does things i cant imagine do a search for it in
the linux archives some where or i could email it out to you
a port to windows would be good but i cant do it
Mike Andrews <mikea@mikea.ath.cx> wrote in message
news:1yNf8.15709$4N3.2052418766@newssvr17.news.prodigy.com...
> _Which_ "this site"?
>
> deyoreo@re.ray.com wrote:
> : This site will show how to use C++ to use the soundcard to fill a
> : buffer. From there, you'll need an FFT and a plot routine. I've got
> : them in C++ if you want.
> : On Fri, 1 Mar 2002 10:02:35 +0000 (UTC), Joe McElvenney
> : <ximac@btinternet.com> wrote:
>
> --
> I had occasion to write today, "Best viewed through the bottom of a
> beerglass" about a website that had another one of those binary
> Windows-only plugins.
> Paul Martin, in the Monastery

1743. Re: What is cases as Homebrew?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 10:35:36 UTC
From: n2cqr@clix.pt
Message-ID: <3c80aa3b.6068676@news.clix.pt>
Source record: 45983

Jim: I guess it is in the eye of the beholder, but I don't think you
can really say that a Heathkit is homebrew. I've run many Heaths and
many HB rigs. When I run Heath, I say, "rig here is a Heath XXX."
When running the homebrew (from scratch) stuff, I say "Rig here is
homebrew." There is a big difference.

Of course, definitions for contests, awards and all that are
established by the organizers.

On Sat, 2 Mar 2002 18:40:39 +1100, "Jim Baxter"
<baxter_family@bigpond.com> wrote:

>Is a kit built transceiver a homwbrew rig?
>Is there an official statement of what is and was is not homebrew?
>73
>VK3DBQ
>
>PS I assembled a Heathkit HW8 QRP CW Rig which I still have many years ago!
>
>

73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 15.7 W
http://planeta.clix.pt/n2cqr

1744. Re: 10.7 Mhz IF and HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 10:37:20 UTC
From: la8ak.xnd@online.no
Message-ID: <3c8019d8.14882461@news.online.no>
Source record: 45984

On Fri, 01 Mar 2002 22:53:10 GMT, "Pete Gianakopoulos"
<n.gianakopoulos@worldnet.att.net> wrote:

>I've been using a 10.7MHz 1st I.F. for some of my receivers, and as long as
>I use a doubly-balanced diode mixer, the spur at 10.7MHz is right around
>.25uV. When an antenna is connected to the receiver, the spur is masked in
>the antenna noise.

Interesting to read

>Now, what Mr. Black did say was correct, especially with some of the older
>mixer designs. If this approach was attempted with some of the older
>topologies, there would be a very high level spur at the I.F. That is one
>big reason that the Hallicrafters SX122, and some of their other receivers
>with that 1650KHz 1st I.F. omitted that range just above the MW band. The
>Drake '4 series was another example of this omission, except in this case,
>it was in the 5.465KHz range.

well, not quite. Drake 2-A .... 2-C have 455kHz and 50kHz IF for 80m
reception, and uses 80M as first IF for other bands. I have never
experienced spurs on 80m with any of my 2-B's. Using a 4645kHz xtal
filter (as for R-4) you do not need 455kHz in the chain to convert to
50kHz.

I don't see mentioned which coverage is intended, so I will still say
455kHz is an optimum IF - at least for frequencies below 4MHz, and the
solution used is usually sought considering the available sources of
components. In our case - having douzens of SSB/FM/CW/AM xtal filters
around for 5.2, 9 and 10.7MHz we might choose different, but still
application of 4.433, 4, 8 or 3.579MHz xtals in ladder type filters
might be interesting to try in some applications

At the moment I am experimenting with 60kHz xtal filter for 136kHz RX

73
Jan-Martin
--
remove ,xnd to reply

1745. Re: UK Component Suppliers List

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 12:36:14 UTC
From: andrew.holmes1@btinternet.com
Message-ID: <3c80c71e.1426058@news.btinternet.com>
Source record: 45941
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Yup, RS certainly are still in business - www.rswww.com
regards
Andy Holmes - G6VTR
andrew.holmes1@btinternet.com

1746. wtb eimac sk800 socket for 4cx1000

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 13:18:27 UTC
From: k9wkj <k9wkj@hotmail.com>
Message-ID: <6x8g8.374$eV4.11870@reggie.win.bright.net>
Source record: 45996

need sk800 for amp project
fits 4cx1000a or 4cx1500b
tnx k9wkj

1747. Low power fm broadcasting

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 14:23:06 UTC
From: George Gleason <g.p.gleason@worldnet.att.net>
Message-ID: <ef5g8.8773$gK2.642063@bgtnsc04-news.ops.worldnet.att.net>
Source record: 45987

I am a rank newbie to low power fm broadcasting
is this the proper group to ask questions about
my lp transmitter/antenna /recievers?
If not would you please direct me to a proper newsgroup
Thank You
George Gleason

1748. Re: Low power fm broadcasting

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 15:23:15 UTC
From: -Your Friend Bill- <none@coqui.net>
Message-ID: <3C80EE63.4850F635@coqui.net>
Source record: 45988

George Gleason wrote:
>
> I am a rank newbie to low power fm broadcasting
> is this the proper group to ask questions about
> my lp transmitter/antenna /recievers?
> If not would you please direct me to a proper newsgroup
> Thank You
> George Gleason

Try alt.radio.pirate

1749. Re: Low power fm broadcasting

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 15:36:46 UTC
From: Woody <woody.white@att.net>
Message-ID: <3C80AC45.6F8C2B0C@att.net>
Source record: 45989

No, pretty much the wrong group.
Try a google search on newsgroups...
_W_

George Gleason wrote:
>
> I am a rank newbie to low power fm broadcasting
> is this the proper group to ask questions about
> my lp transmitter/antenna /recievers?
> If not would you please direct me to a proper newsgroup
> Thank You
> George Gleason

--
My website: http://woody.white.home.att.net/
WB4QXE - Homebrew Ham/Electronics Projects &
eclectic Scanning Electron Microscope Images

1750. Re: LOOKING FOR BROKE AMPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 15:57:50 UTC
From: witchdoc@attbi.com
Message-ID: <3aed93cc.0203020757.6e321944@posting.google.com>
Source record: 45990
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

What *I'm* looking for is an amp for 6 meters, like one of those little blue Henrys that were around a few years ago. The few 6m amps they sell now have much more power than what I need, and they're not cheap... is there a way to switch the filters on an outlaw CB linear to convert it to 6m, thereby bringing its crime spree to an end?

Guy
++++++++

1751. ilink - Anyone fancy chatting about Homebrewing??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 16:11:00 UTC
From: Ken Linney <Ken.Linney@btinternet.com>
Message-ID: <a5qtijfmm1@helle.btinternet.com>
Source record: 45940

Hello All

ilink is most useful for chatting around the world and the program
is only 200Kb or so. You need a mic & the quality is good. At present
I am interested in such things as Xtal ladder filters / Circuit
simulation software / Antenna modelling.

Get the program ilink from the download section of:

http://www.aacnet.net/

Look forward to some QSO's .... 73es Ken, G3UDA

1752. Re: What is cases as Homebrew?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 16:11:03 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <3c80f8f9_2@newsa.ev1.net>
Source record: 45991

A "Home brew" is any piece of gear which must have some level of assembly in order to operate. i.e. soldering, bolting together, wiring(internally).
If you must install and or solder in a primary part in oder for the unit to function, it can be called a "Home brew".
This does NOT include taking it out of a shipping box, plugging it into a power source and turning it on.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Jim Baxter" <baxter_family@bigpond.com> wrote in message
news:R70g8.2737$wb7.10500@newsfeeds.bigpond.com...
> Is a kit built transceiver a homwbrew rig?
> Is there an official statement of what is and was is not homebrew?
> 73
> VK3DBQ
>
> PS I assembled a Heathkit HW8 QRP CW Rig which I still have many years
ago!
>
>

1753. Re: LOOKING FOR BROKE AMPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 16:33:39 UTC
From: Screaming Skull <KG4IVT@hot.mail.spicedmeat.sucks.leave.me.alone.com>
Message-ID: <D97g8.9379$3O2.3605976@typhoon.southeast.rr.com>
Source record: 45993
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

It is very possible. I have seen this brought up before but it may depend on the design of the amp. Legality brings up a whole other issue that I am sure a few people would be able to pound into your head, but then again it may not matter to licensed amateurs. Anyways, I have a "6 meter" linear amplifier made by a company called Fist Commercial Communications. It has two 6LQ6 sweep tubes in it and when I got it there was a coil tap inside that was obviously moved. I asked someone about it and they said that it may have been converted to 11/10m. So if it was possible to convert this amp, it may be possible with a few other tube/SS amplifiers.

Good Luck!

"That Guy Again" <witchdoc@attbi.com> wrote in message
news:3aed93cc.0203020757.6e321944@posting.google.com...
> What *I'm* looking for is an amp for 6 meters, like one of those
> little blue Henrys that were around a few years ago. The few 6m amps
> they sell now have much more power than what I need, and they're not
> cheap... is there a way to switch the filters on an outlaw CB linear
> to convert it to 6m, thereby bringing its crime spree to an end?
>
> Guy
> ++++++++

1754. Re: Low power fm broadcasting

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 16:43:58 UTC
From: Bill & Suzie Whatley <spud286@attbi.com>
Message-ID: <ij7g8.63074$vP.254417@rwcrnsc51.ops.asp.att.net>
Source record: 45992

try
rec.radio.broadcasting
or
alt.radio.broadcasting

73
WA5VRL

1755. Re: What is cases as Homebrew?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 18:02:29 UTC
From: Bruce Lane <spammers@buzz.off>
Message-ID: <MPG.16eab39218025ddf9897f2@news.drizzle.com>
Source record: 45995

In article <R70g8.2737$wb7.10500@newsfeeds.bigpond.com>,
baxter_family@bigpond.com says...

> Is a kit built transceiver a homwbrew rig?

Not to my perception.

> Is there an official statement of what is and was is not homebrew?

I don't know how 'official' it is, but... My understanding is that
"homebrew" describes some piece of equipment that you, as the homebrewer,
designed and built from the ground up. This is what I was taught when I
first got my license back in 1977.

With that said: We do see the occasional confuzzled person in this
group who doesn't see the 'rec.radio.amateur' part of the newsgroup name,
focuses on 'homebrew,' and makes some post about creating good beer.
Silly people... ;-)

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

1756. Re: What is cases as Homebrew?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 18:13:43 UTC
From: mcalhoun@ksu.edu
Message-ID: <a5r4on$e7v@unix1.cc.ksu.edu>
Source record: 45898

>Is a kit built transceiver a homwbrew rig?

I've seen various "definitions" of "homebrew" for at least 30 years!

PERSONALLY, I don't think ASSEMBLING a kit goes far enough to be called "homebrewing"; to me there must be some element of creativity and/or experimentation (for example, taking one circuit from this magazine and one from another source, then putting them together and making them work, whether by using smarts or just trial and error) If there is no element of chance and no possibility of failure (BEYOND just cold-solder joints), then I just don't call it "homebrew".

On the other hand, I've heard people talk about "homebrewing" an EME station by connecting the appropriate transmitter, receiver, low-noise amplifier, dish, etc., with pieces of already-terminated coax. Since **I** don't (currently) know how to do that, I might call it "homebrewing". But if I ever did that, it would become "assembling" again.

Of course, unless one actually MAKES (not just purchases) the individual parts (tubes, transistors, capacitors, resistors, etc.), then even my definition becomes little more than "assembling"! Even then, an expert physicist might just call a homebrewed capacitor an "assembly of tinfoil and waxed paper"! So I think it's a matter of degree.

I have ASSEMBLED several kits (in fact, I currently have a TenTec Xverter kit waiting to be assembled), I've HOMEBREWED (my definition) several transmitters and at least one receiver "from scratch" (where I define "scratch" as meaning I got the circuit from a magazine and all the parts from my junque box), I've DESIGNED several computers and small electronic circuits (but I still bought--or scrounged--the transistors, IC's, wire, etc., and "just" connected everything appropriately.

I've never made a tube or transistor, but I have "made" a diode, if one counts touching a pointy wire to a piece of Galena "making"!-)

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

1757. Re: Low power fm broadcasting

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 18:18:14 UTC
From: George Gleason <g.p.gleason@worldnet.att.net>
Message-ID: <GH8g8.10361$106.717515@bgtnsc05-news.ops.worldnet.att.net>
Source record: 45897

"Bill & Suzie Whatley" <spud286@attbi.com> wrote in message
news:ij7g8.63074$vP.254417@rwcrnsc51.ops.asp.att.net...
>
>
> try
> rec.radio.broadcasting
> or
> alt.radio.broadcasting
>
> 73
> WA5VRL
>
Thanks guy I went to alt radio pitrate and found out I will be in
violaation of several federal laws WHEN I impliment my broadcast
I hope they don't get lost in my poppy feilds trying to find me
LOL
George(yes my real name)

1758. New Domain - k7on.com

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 18:39:08 UTC
From: Brian Short <k7on@earthlink.net>
Message-ID: <MPG.16eb29648820ad1a9896e7@news.earthlink.net>
Source record: 45899
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.scanner,rec.radio.shortwave,rec.radio.swap

I have registered a new domain k7on.com and my web page
will be re-located on managed servers with high-bandwidth
connections.

Please replace any bookmarks or links with:
http://www.k7on.com/

For the time being, while DNS caches update, I will
keep the qsl.net/k7on web page online, but expect no
updates.

Thanks, Brian

--
People who think they know it all are annoying
to those of us who do.
--
See my web page: http://www.k7on.com/
--

1759. Parasitics of SMD resistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 19:43:03 UTC
From: Peter Bolch <peter.bolch@t-online.de>
Message-ID: <a5ra0jqse07$1@news.t-online.com>
Source record: 45900

Hi

I have searched the web sites of quite some manufacturers of SMD resistors but could not find detailled information about the parasitics of resistors.

In an application note I found that with a 0603 1k resistor there is a 1.7 nH inductor in series with the resistor.

Can someone here provide more information?

Peter

1760. Re: UK Component Suppliers List

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 19:51:23 UTC
From: Ashley Booth <tabcom@btinternet.comremove>
Message-ID: <1015098744.22026.0@iapetus.uk.clara.net>
Source record: 45901
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Steve Terry" <g4wwk@oinospamtesco.net> wrote in message
news:SoYf8.76347$Ah1.10084707@news2-win.server.ntlworld.com...
> "geoffrey brown" <geoff@spontaflex.freeserve.co.uk> wrote in message
> news:a5on5q$ur5$1@news6.svr.pol.co.uk...
> > I'm posting a list of UK component suppliers
> > on my website http://www.spontaflex.freeserve.co.uk/
> > to assist anyone contemplating constructing any
> > of Sir douglas Halls circuits.
> > this is what I have so far
> <snip>
> >
> Bonex Slough
> http://217.34.228.137/startpages/content/home.htm
>
> Steve Terry
>
>

I keep getting a virus alert on the Bonex site. (W32.Nimda)

Ashley

1761. Transferring Text/Graphics to Front-panel

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 19:54:29 UTC
From: Klaus Vestergaard Kragelund <KlausKVIK@hotmail.com>
Message-ID: <3c80d966$0$39855$edfadb0f@dspool01.news.tele.dk>
Source record: 45986

I would like if someone has input to this.

My process of creating "proffesional" looking front-panels is this:

1. Print-out the image inverted/mirrored onto a transparent foil
2. Cover places that need to be transparent with tape.
3. Spray-paint the foil to get the background colour (several times). Better yet use one layer laser-colour foil
4. Cut-out holes for pots and connectors
5. Spray an adhesive onto the foil (or use double-sided adhesive foil as an extra layer) to clue it to the front

I'm using thin aluminium for the front plate by the way

My problem is that I would like two special cases to be possible

1. To have the places where e.g. LCD displays appear clear and the rest of the panel dimm/dull/dead

Solution: Sandblast the foil with the clear areas taped? (stupid idea I guess)

2. Have LEDs light up text that normally is invisible

Solution: Put an exstra foil-layer with the LED text in black onto the background and try to light up the text so it creates a shadow or lights up all the way through to the front?

Any ideas?

Thanks

Klaus

1762. NEED 5 POSITION 2 WAFER SWITCH FOR WATT METER

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 20:18:47 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3C8133A7.482546FF@charter.net>
Source record: 45902
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.swap

I have a Macaw PRM-1 watt meter that has a flaky 5 position switch in it
tried to claen etc. but still acts up. its nothing fancy about the
switch double wafer 5 position.
Anyone have one laying around in thier junk pile?
thanks chris NI4L

--

NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... <http://www.angelfire.com/nb/ni4l/>

1763. Re: Low power fm broadcasting

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 20:27:50 UTC
From: J Yazel <jyazel@nlsNOSPAM.net>
Message-ID: <k7d28uoi1ellipc9jbino37i77c4tfbksr@4ax.com>
Source record: 45909

>Thanks guy I went to alt radio pitrate and found out I will be in
>violaation of several federal laws WHEN I impliment my broadcast
>I hope they don't get lost in my poppy feilds trying to find me
>LOL
>George(yes my real name)
>

Very low-power un-licensed FM transmitters are legal.

Radio Shack (and others) sell them. I have one.

I'm not sure whether they must be type-approved or not.

Jack W8RAG

1764. Re: MM5314 Clock Chip data sheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 20:35:30 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C813792.CC981507@ieee.org>
Source record: 45903

.pdf would be better.... but I will take what I can get.

I have the National 1984 Logic Data book, but it isn't in there.

Clyde

Tom Bruhns wrote:

> Hi Clyde,
>
> Utterly wierd. I just looked up that data sheet two evenings ago,
> after not having opened that book for probably five years (having
> nothing to do with our recent email exchange, either!). Yes, I have
> one. I can probably scan it and turn it into a .gif for you, if that
> would work.
>
> Cheers,
> Tom
>
> "Clyde R. Shappee" <cshappee@ieee.org> wrote in message
news:<3C802402.EB2AF17E@ieee.org>...
> > Hello,
> >
> > My station clock that I built from a kit in 1975? has the National
> > MM5314 chip in it. I have an extra chip and am thinking about a new
> > clock.
> >
> > Does anyone here have a data sheet?
> >
> > Of course, I'd pay reasonable copy/shipping charges.
> >
> > Clyde
> >
> > KA1CRV

1765. Re: UK Component Suppliers List

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 20:39:34 UTC
From: geoffrey brown <geoff@spontaflex.freeserve.co.uk>
Message-ID: <a5rda6qvo1@news5.svr.pol.co.uk>
Source record: 45904
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

all I get is bad gateway error

cheers

geoff
Ashley Booth <tabcom@btinternet.comremove> wrote in message
news:1015098744.22026.0@iapetus.uk.clara.net...
>
> "Steve Terry" <g4wwk@oinospamtesco.net> wrote in message
> news:SoYf8.76347$Ah1.10084707@news2-win.server.ntlworld.com...
> > "geoffrey brown" <geoff@spontaflex.freeserve.co.uk> wrote in message
> > news:a5on5q$ur5$1@news6.svr.pol.co.uk...
> > > I'm posting a list of UK component suppliers
> > > on my website http://www.spontaflex.freeserve.co.uk/
> > > to assist anyone contemplating constructing any
> > > of Sir douglas Halls circuits.
> > > this is what I have so far
> > <snip>
> > >
> > Bonex Slough
> > http://217.34.228.137/startpages/content/home.htm
> >
> > Steve Terry
> >
> >
>
> I keep getting a virus alert on the Bonex site. (W32.Nimda)
>
> Ashley
>
>

1766. Re: NEED TUNED INPUT CIRCUT SCHEMATIC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 20:50:47 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3C813B27.53EFD4C1@charter.net>
Source record: 45906

yes it is have a trasistor amp want to convert to work on all band have the
filter board made up just need a tuned input circut for 4 - sc2879

J M Noeding wrote:

> On Fri, 01 Mar 2002 04:40:42 -0500, NI4L <ni4l@charter.net> wrote:
>
> >Hi
> >anyone have a schematic for a tuned input board. with the values of
> >componets....i'm making a 10-80 solid state amp that i want to work on
> >all bands .would gladly pay postage and copy fees
> >thanks
> >chris NI4L
> >
> suppose it is an input board for Linear amplifier?
>
> --
> remove ,xnd to reply

--

NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... <http://www.angelfire.com/nb/ni4l/>

1767. Re: UK Component Suppliers List

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 20:51:01 UTC
From: geoffrey brown <geoff@spontaflex.freeserve.co.uk>
Message-ID: <a5rdvkmdl1@news6.svr.pol.co.uk>
Source record: 45905
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

http://217.34.228.137/startpages/content/home.htm

working ok now
norton found no virus

cheers

geoff

Ashley Booth <tabcom@btinternet.comremove> wrote in message
news:1015098744.22026.0@iapetus.uk.clara.net...
>
> "Steve Terry" <g4wwk@oinospamtesco.net> wrote in message
> news:SoYf8.76347$Ah1.10084707@news2-win.server.ntlworld.com...
> > "geoffrey brown" <geoff@spontaflex.freeserve.co.uk> wrote in message
> > news:a5on5q$ur5$1@news6.svr.pol.co.uk...
> > > I'm posting a list of UK component suppliers
> > > on my website http://www.spontaflex.freeserve.co.uk/
> > > to assist anyone contemplating constructing any
> > > of Sir douglas Halls circuits.
> > > this is what I have so far
> > <snip>
> > >
> > Bonex Slough
> > http://217.34.228.137/startpages/content/home.htm
> >
> > Steve Terry
> >
> >
>
> I keep getting a virus alert on the Bonex site. (W32.Nimda)
>
> Ashley
>
>

1768. Re: UK Component Suppliers List

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 20:51:33 UTC
From: marula31@hootmail.com
Message-ID: <3c813999.4982898@news.freeserve.net>
Source record: 45907
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

On Fri, 1 Mar 2002 19:51:42 -0600, "Crazy George"
<munschNO@attglobal.net.SPAM> wrote:

>Question from the colonies: How about this RS outfit? I saw one of their
>catalogs [catalogues] a couple of years ago, are they still in
> business? (Not Radio Shack or Tandy, I think they use there.)

Yes, they are: Radiospares AKA Electromail.

Tandy was taken over by the Carphone Warehouse.

--
gm4

1769. Re: NEED TUNED INPUT CIRCUT SCHEMATIC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 20:52:42 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3C813B9A.C1AE935E@charter.net>
Source record: 45908

yes it is have a trasistor amp want to convert to work on all band have the
filter board made up just need a tuned input circut for 4 - sc2879

J M Noeding wrote:

> On Fri, 01 Mar 2002 04:40:42 -0500, NI4L <ni4l@charter.net> wrote:
>
> >Hi
> >anyone have a schematic for a tuned input board. with the values of
> >componets....i'm making a 10-80 solid state amp that i want to work on
> >all bands .would gladly pay postage and copy fees
> >thanks
> >chris NI4L
> >
> suppose it is an input board for Linear amplifier?
>
> --
> remove ,xnd to reply

--

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Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... <http://www.angelfire.com/nb/ni4l/>

1770. 8 Pin SMT Programming Adapter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 20:57:39 UTC
From: k1el@aol.com
Message-ID: <20020302155739.11523.00001905@mb-dh.aol.com>
Source record: 45910

I have a new SMT programming adapter for sale. It is for 8 pin
SOIC 208 mil packages. The following PIC parts will fit in this adapter:

12C508, 12C509, 12C671, 12C672, 18F010, 18F020.

You can obtain more info about it at:
www.logicalsys.com
Do a search for PA8SO1-2006-3

I paid $70.00 for it, I'll sell it for $50.00 shipped priority mail (conus).

Thanks, Steve

1771. Re: ARRL again affirms eQSL Cards -OK- for DXCC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 21:01:38 UTC
From: Ronald Oberloh <wa0kds@yahoo.com>
Message-ID: <3C813DB2.E4376C6B@yahoo.com>
Source record: 45911
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.swap

From: Moore, Bill, NC1L
[mailto:bmoore@arrl.org]
Sent: Friday, February 08, 2002 12:31 PM
To: 'Richard B. Drake'
Cc: DXCC
Subject: RE: Professionally Printed and
mailed eQSL's
Hi Rich:

Something does not sound right here. You are
saying that Dave is physically mailing out QSL
cards by the US postal system? This is news to
me.

If you are my QSL manager and I send you my
logs by e-mail, I am sending them direct from
point A to point B. Just as if I was sending them
to you by regular mail. This is OK. I remember
somewhere several years ago that some people
used to get their logs over the air on RTTY and
another digital mode (AMTOR I think). Not a
problem.

However, if as the result of a log being sent to
E-QSL, someone goes in and receives a card
electronically and uses it for DXCC, that
e-QSL cannot be accepted for DXCC credit
under rule 2. I spent a bit of time with a simple
shareware program to prove the unreliability of
that method.

However, if Dave, acting as QSL manager
with station logs completes a card (even
one from his printer) and sends it by mail to
you, this is an acceptable exchange and we
have see this often for several years now.
(assuming he phyiscally checks the log). Many
people use self-made cards from their printer.
Each one is evaluated on a case by case basis,
and many times under Section IV rule 4(b) we
have conducted an audit to insure the vaildity of
a card like this.

In cases like this it would be REAL nice if they
used a stamp or placed their initials or signature
on it, but this is not required by the rules.
However, this issue has been discussed and has
been given some consideration.

To clarify, if Dave is sending out cards
through the US Postal System as the result
of the log(s) he receives, this is OK. (This
would basically be operating as QSL
manager).

Regards,

Bill Moore NC1L
DXCC Manager

Note: Use of this message is authorized in
discussions as long as it is used in its entirity and

as long as parts are not edited out.

Jim Higgins wrote:

> On Fri, 01 Mar 2002 18:58:49 -0700, in
> <3C8031D8.F66E004A@yahoo.com>, Ronald Oberloh <wa0kds@yahoo.com>
> wrote:
>
> >Think you are wrong on this one but that is your choose.
>
> OK, but I think you would be well advised to check directly with
> the ARRL yourself before you commit to collecting eQSLs toward
> any ARRL sponsored award. They do NOT accept them.
>
> --
> Jim Higgins, quasimodo AT yahoo DOT com
> icbm: 33.55.34N, 80.24.21W

1772. Re: UK Component Suppliers List

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 21:11:49 UTC
From: zeus@myth.demon.co.uk
Message-ID: <pmf28u8cvq3rvuuob2nf2pj4roanqradhl@4ax.com>
Source record: 45912
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Radio Spares (as was) RS components/Electrocomponents?

http://rswww.com

I guess the rs.com domain had gone already. Just to add a few more:

http://www.greenweld.co.uk/
http://www.farnell.co.uk

Mike.

On Fri, 1 Mar 2002 19:51:42 -0600, "Crazy George"
<munschNO@attglobal.net.SPAM> wrote:

>Question from the colonies: How about this RS outfit? I saw one of their
>catalogs a couple of years ago, are they still in business? (Not Radio
>Shack or Tandy, I think they use there.)

1773. Re: UK Component Suppliers List

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 21:40:53 UTC
From: Steve Terry <g4wwk@oinospamtesco.net>
Message-ID: <fGbg8.33941$Hg1.5603953@news6-win.server.ntlworld.com>
Source record: 45913
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

<zeus@myth.demon.co.uk> wrote in message
news:pmf28u8cvq3rvuuob2nf2pj4roanqradhl@4ax.com...
> Radio Spares (as was) RS components/Electrocomponents?
> http://rswww.com
> I guess the rs.com domain had gone already. Just to add a few more:
> Mike.
>
Try
http://www.rs-components.com/

They have a sales counter in colonial way, North Watford, Herts. J5 M1
But you need a business letter head to buy there
(not a big problem)

Very impressive range of stock

Steve Terry

1774. WANTED: how to modify AA battery holder for handheld to accept 9V batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 22:07:50 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0203021407.3d679671@posting.google.com>
Source record: 45914
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

There was a QST article a few years ago on how to modify a AA battery holder to accept 9V batteries. It involved cutting parts of the plastic out and rewiring the inside of the unit. Has anyone here done anything like this?

I have an old FBA-15 AA battery holder for my Yaesu FT-50R that I replaced. (It had some bad contacts, and while I could revive it by placing aluminum foil in the appropriate places or scrubbing the metal contacts with sandpaper, I wanted something more reliable.)

I still have the FBA-15. What tools do I need to rip out the plastic and metal "walls" inside so the holder will accomodate a 9V battery? How would I secure this 9V battery inside the holder?

Jason Hsu, AG4DG
jason_hsu_802701@@@@yahoo.com
http://www.jasonhsu.com/ham_radio-technical.html

1775. Re: WANTED: how to modify AA battery holder for handheld to accept 9V batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 22:43:18 UTC
From: "J. Harvey" <JM001.Harvey@sympatico.ca>
Message-ID: <4Acg8.26397$tA.4402404@news20.bellglobal.com>
Source record: 45916
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

"Jason Hsu"
> ...Yaesu FT-50R
> accomodate a 9V battery?

How fast can you talk ?

1776. Re: MM5314 Clock Chip data sheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 22:45:17 UTC
From: Wayne <wayneleake@wayneleake.net>
Message-ID: <u82lg1hnjmtnc1@corp.supernews.com>
Source record: 45915

Many of those chips became obsolete not long after they hit the markets, or
so it seemed.
I built one clock from a kit, and had to get the clock chip replaced right
away.
If I had to replace that chip now, I'd be SOL, as it stopped being readily
available shortly after I built the clock.
It did work for years, but I wound up leaving it behind when I moved to CA,
and don't know if my brother tossed it or what. he's kinda dumb on that
stuff.
But now, it's hardly worth the effort, unless one wanted to build an alarm
or some such.
And most interfaced to LED's which are a bit hard to get now.
I'd do an LCD version if I did one at all. Though a fluorescent display
might be nice.

"Clyde R. Shappee" <cshappee@ieee.org> wrote in message
news:3C813792.CC981507@ieee.org...
> .pdf would be better.... but I will take what I can get.
>
> I have the National 1984 Logic Data book, but it isn't in there.
>
> Clyde
>
> Tom Bruhns wrote:
>
> > Hi Clyde,
> >
> > Utterly wierd. I just looked up that data sheet two evenings ago,
> > after not having opened that book for probably five years (having
> > nothing to do with our recent email exchange, either!). Yes, I have
> > one. I can probably scan it and turn it into a .gif for you, if that
> > would work.
> >
> > Cheers,
> > Tom
> >
> > "Clyde R. Shappee" <cshappee@ieee.org> wrote in message
news:<3C802402.EB2AF17E@ieee.org>...
> > > Hello,
> > >
> > > My station clock that I built from a kit in 1975? has the National
> > > MM5314 chip in it. I have an extra chip and am thinking about a new
> > > clock.
> > >

> > > Does anyone here have a data sheet?
> > >
> > > Of course, I'd pay reasonable copy/shipping charges.
> > >
> > > Clyde
> > >
> > > KA1CRV
>

1777. TUNE YOUR AMP/RADIO WITH EASE.....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 22:47:29 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3C815681.85341C4D@charter.net>
Source record: 45917

SSB PULSER....
Works with all amps and Tube
type radios....Tune your gear up without fear anymore.
Easy to install in any mic
or radio.. Uses 9 volt power source.Hooks to audio hot and ground.
Tune your gear to full
output using this SSB pulser. Small enough to fit in the base of a
microphone.
This is NOT A CW PULSER
which key's and unkey's in the CW mode . This works in SSB MODE.
Key your mic push the
moumentary switch to activate the pulser and Tune Away.
Let me give you an
example.....
Tuning a Dentron Clipperton
L amp. with a Icom 751 A radio, Pulser installed in a Ten_tec 705 mic.
set radio to full output on
desired frequency SSB MODE into a resonate antenna of course.....or
dummy load
Set amp to proper band
settings
Key mic and push Pulser
button..... watch watt meter it will show aprox 100 to 200 watts out
when tuned to peak output
using Pulser....Remember don't key too long 10-15 seconds
Then check output using
voice.... It will be full Output 1200 watts
See How easy that was....
The amp loved it and now your ready to talk at Full output.
The same tuning is used to
tune a tube type rig also.
35.00 +2.00 shipping

--

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Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... <http://www.angelfire.com/nb/ni4l/>

1778. Re: UK Component Suppliers List

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 23:16:20 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <24dg8.34491$Hg1.5687566@news6-win.server.ntlworld.com>
Source record: 45918
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

> Question from the colonies: How about this RS outfit? I saw one of their
> catalogs a couple of years ago, are they still in business? (Not Radio
> Shack or Tandy, I think they use there.)
==========
You probably mean Radio Spares . For years they have had and still have a 6
monthly CD-ROM catalogue with reference to their web site:
www.rscomponents.com

Frank gm0csz.kn6wh@ntlworld.com

1779. Re: LOOKING FOR BROKE AMPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 23:16:48 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <34dg8.34492$Hg1.5687734@news6-win.server.ntlworld.com>
Source record: 45919
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

> What *I'm* looking for is an amp for 6 meters, like one of those
> little blue Henrys that were around a few years ago. The few 6m amps
> they sell now have much more power than what I need, and they're not
> cheap... is there a way to switch the filters on an outlaw CB linear
> to convert it to 6m, thereby bringing its crime spree to an end?
==========

Some time ago a kind fellow Ham, also on this NG ,sent me an article from
QST
March 1967, by Gerald D. Jones , K2AYM
pages 11- 15 : Six-Meter Kilowatt with 4-400s or 4-125As . Anode voltage =
2000 V.
In addition to the 2 RF power valves ,a screen voltage regulator employing a
6BF5 tube is used ,but of course this can be another type.
Kilowatt is meant as 1000W input as was customary in those days. So the
output is probably 600W max.
The design can be scaled down for lower power .

There is another design for an 80W RF 6m amp by G4IDE , utilising a double
tetrode QQY06-40A or its US (near)equivalent, of which I have a scanned
image on
my system . If you need it pse let me know , if possibe in the next 2 days.

Frank gm0csz.kn6wh@ntlworld.com

1780. Re: LOOKING FOR BROKE AMPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-02 23:49:20 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3C816500.FEBE866@charter.net>
Source record: 45920
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

Hi Frank
can you send me a copy via email?
thanks chris NI4L

Frank Dinger wrote:

> > What *I'm* looking for is an amp for 6 meters, like one of those
> > little blue Henrys that were around a few years ago. The few 6m amps
> > they sell now have much more power than what I need, and they're not
> > cheap... is there a way to switch the filters on an outlaw CB linear
> > to convert it to 6m, thereby bringing its crime spree to an end?
> ==========
> Some time ago a kind fellow Ham, also on this NG ,sent me an article from
> QST
> March 1967, by Gerald D. Jones , K2AYM
> pages 11- 15 : Six-Meter Kilowatt with 4-400s or 4-125As . Anode voltage =
> 2000 V.
> In addition to the 2 RF power valves ,a screen voltage regulator employing a
> 6BF5 tube is used ,but of course this can be another type.
> Kilowatt is meant as 1000W input as was customary in those days. So the
> output is probably 600W max.
> The design can be scaled down for lower power .
>
> There is another design for an 80W RF 6m amp by G4IDE , utilising a double
> tetrode QQY06-40A or its US (near)equivalent, of which I have a scanned
> image on
> my system . If you need it pse let me know , if possibe in the next 2 days.
>
> Frank gm0csz.kn6wh@ntlworld.com

--

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Click here for more info... <http://www.angelfire.com/nb/ni4l/>

1781. Need help with conventional XTAL FILTER (60kHz)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-03 00:09:20 UTC
From: la8ak.xnd@online.no
Message-ID: <3c81654a.99745091@news.online.no>
Source record: 45921

Tried to copy the SM5BSZ Narrow Filter with 2 * 100 kHz Calibrator
X-tals http://ham.te.hik.se/homepage/sm5bsz/xtals.htm
but cannot vary the bandwidth

Uses a 59.995kHz xtal and feed the filter with a tuned circuit loaded
at the link to xtal with 1000ohm, measured the xtal to be 33pF holder
capacity, and use a 40pF trimmer capacitor which seem to work as it
should, but I am not certain which frequency it should be adjusted at.
If I choose 70kHz the stop-band leakage may still be improved on
75kHz, and opposite
The input coil has low Q (40) and wound on a ferrite toroid core with
1300pF and checked the tuning with Q-meter.

But output load only seems to vary the bandwidth by small degree, more
than 100Hz -3dB bandwidth is hardly possible. Tried different values
of load resistance between 22k and 1M. Tried with and without tuned
circuit at the output, and the tuned circuit consists of 4.3-5mH coil
with Q=650, capacitance = 1500pF. The only measured effect was that
center frequency changed some tens of hertz

Tried to add series resistors (up to 1000 ohm) to the xtal, but it had
little effect.

What I need is 200Hz -3dB bandwidth for my 136kHz converter and 60kHz
IF was chosen since I have many xtals around this frequency

I use a Siemens Level Measuring equipment with 10Hz frequency solution
and receiver follows transmitter, 20 or 2000Hz selectivity.

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

1782. Re: WTB 30KV Hi E wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-03 00:11:21 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <q9i08uoamk0qeqcc7g0qfa9d01j1scf7md@4ax.com>
Source record: 45922

Paul Cooper <plcooper@starband.net> wrote:

>WTB 2 lengths of 30KV Hi Voltage wire with surface smooth (nylon). One
>length in red and one in black. Both lengths to be around 50 feet.

If you are wanting to run a pair of high voltage wires you can use
RG-8 coax as long as it has the SOLID (NOT foam) dielectric. If you're
running one ground and one HV you just need one length of cable. If
one is + HV and the other is - HV, then use 2 lengths of RG-8.

In most installations, the shield is a welcome addition to safety,
convenience, and voltage standoff.

-

Jim Adney jadney@vwtype3.org
Madison,Wisconsin USA

1783. REQ: Kenwood KPG-66d, KPG-44

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-03 02:07:42 UTC
From: nobody@home.com
Message-ID: <ka138u0vcg3mspjcmhm0rq0q2sl2rjjpce@4ax.com>
Source record: 45923

Looking for a source of the wiring for the KPG-46 cable and for the programming software KPG-66d

Bob

1784. Re: MM5314 Clock Chip data sheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-03 02:44:26 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C818E09.422DAEBE@ieee.org>
Source record: 45924

Actually, You are not SOL...

My station clock seemed to move on to Si heaven after a bad electrical storm....
So I had to buy a new chip. Found it at Debco Electronics, so, they are
available.

I am working on a (sorry guys, please don't gag) a Nixie clock. After I posted
the data sheet request, I realized this wasn't a BCD clock. I still would like
the data sheet for reference.

73s.

Clyde
KA1CRV

Wayne wrote:

> Many of those chips became obsolete not long after they hit the markets, or
> so it seemed.
> I built one clock from a kit, and had to get the clock chip replaced right
> away.
> If I had to replace that chip now, I'd be SOL, as it stopped being readily
> available shortly after I built the clock.
> It did work for years, but I wound up leaving it behind when I moved to CA,
> and don't know if my brother tossed it or what. he's kinda dumb on that
> stuff.
> But now, it's hardly worth the effort, unless one wanted to build an alarm
> or some such.
> And most interfaced to LED's which are a bit hard to get now.
> I'd do an LCD version if I did one at all. Though a fluorescent display
> might be nice.
>
> "Clyde R. Shappee" <cshappee@ieee.org> wrote in message
> news:3C813792.CC981507@ieee.org...
> > .pdf would be better.... but I will take what I can get.
> >
> > I have the National 1984 Logic Data book, but it isn't in there.
> >
> > Clyde
> >
> > Tom Bruhns wrote:
> >
> > > Hi Clyde,
> > >
> > > Utterly wierd. I just looked up that data sheet two evenings ago,
> > > after not having opened that book for probably five years (having

> > > nothing to do with our recent email exchange, either!). Yes, I have
> > > one. I can probably scan it and turn it into a .gif for you, if that
> > > would work.
> > >
> > > Cheers,
> > > Tom
> > >
> > > "Clyde R. Shappee" <cshappee@ieee.org> wrote in message
> news:<3C802402.EB2AF17E@ieee.org>...
> > > > Hello,
> > > >
> > > > My station clock that I built from a kit in 1975? has the National
> > > > MM5314 chip in it. I have an extra chip and am thinking about a new
> > > > clock.
> > > >
> > > > Does anyone here have a data sheet?
> > > >
> > > > Of course, I'd pay reasonable copy/shipping charges.
> > > >
> > > > Clyde
> > > >
> > > > KA1CRV
> > >

1785. Wanted- Watkins Johnson WJ-8711 Receiver Manuals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-03 03:02:48 UTC
From: W3BV <w3bv@arrl.net>
Message-ID: <sngg8.448$zg.55259@news2.voicenet.com>
Source record: 45925

Want to Buy: Operator and service manuals for Watkins Johnson WJ-8711 HF Receiver.

Alan, W3BV

1786. Re: Super Regen (colpitts)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-03 04:05:45 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0203022005.c67ddfa@posting.google.com>
Source record: 45926

"Macgman" <macgyver9@iname.com> wrote in message
news:<D2Wf8.4676$va.587@nwrddc02.gnilink.net>...
> Hello all,
>
> I have been looking for information on Super Regenerative receivers and have
> had no luck. All I seem to find is semi-complete cookbook examples nothing
> really comprehensive (mostly tube stuff). I am looking for a solid state
> Colpiits based J-FET or BJT design, it would be great if data and an
> explanation of what is going on in the circuit would accompany the
> schematic. I am looking for somthing in the VHF/UHF band, preferrably UHF
> but VHF is just as good for starters. I would appreciate any help you can
> give me, please send responses to rfmac2000@yahoo.com
>
> Thanks!!!
>
> Best Regards,
> Nick
> KC6SDF

Charles Kitchin has gone back, looked at the superregen from it's
beginnings eighty years ago, and tried to add to the field. He's had
a number of QST and QEX articles. I've posted about him before,
and I have posted the dates of specific articles. The 2001 ARRL Handbook
has one of his superregen receivers, and probably other recent editions
have the article too.

A few weeks back, someone posted here about how he'd found an article on
the ARRL website, http://www.arrl.org and how he found it too complicated
and that he'd taken out lots of parts. He fell into the trap of the
superregen, ie that it's not really useful, so you might as well make it
as simple as possible. Charles Kitchin has tried to improve the operation,
by adding some parts. It isn't like the depression, when adding an extra
stage would have significantly added to the cost. I found the article
there by doing a search at the ARRL site on superregen.

I recently learned that you can see US patents on the web, at:
http://www.uspto.gov/patft
So you can look up Howard Armstrong's original patent for the superregen,
issued in July of 1922, by visiting that site and looking up
patent number 1,424,065.

Michael VE2BVW

1787. Re: What is cases as Homebrew?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-03 08:02:11 UTC
From: "Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net>
Message-ID: <E1EA258071579AFF.4C85163E30A7709A.941E22BDCFF6C8C5@lp.airnews.net>
Source record: 45927

On Sat, 2 Mar 2002 10:11:03 -0600, "M.E." <bogus@nospam.com> wrote:

>A "Home brew" is any piece of gear which must have some level of assembly in
>order to operate. i.e. soldering, bolting together, wiring(internally).
>If you must install and or solder in a primary part in oder for the unit to
>function, it can be called a "Home brew".
>This does NOT include taking it out of a shipping box, plugging it into a
>power source and turning it on.

My Yaesu is a homebrew rig by that definition, since I had to solder
some new lightbulbs into the display backlight and touch up a solder
joint on the mic connector.

Joe Bramblett, KD5NRH
kd5nrh@kd5nrh.net
http://www.kd5nrh.net

1788. Re: Low power fm broadcasting

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-03 09:20:26 UTC
From: Wiskerstherat <mevans@tm.net>
Message-ID: <3C82144B.77DB77BB@tm.net>
Source record: 45928

And your point is. :)

George Gleason wrote:

> "Bill & Suzie Whatley" <spud286@attbi.com> wrote in message
> news:ij7g8.63074$vP.254417@rwcrnsc51.ops.asp.att.net...
> >
> >
> > try
> > rec.radio.broadcasting
> > or
> > alt.radio.broadcasting
> >
> > 73
> > WA5VRL
> >
> Thanks guy I went to alt radio pitrate and found out I will be in
> violaation of several federal laws WHEN I impliment my broadcast
> I hope they don't get lost in my poppy feilds trying to find me
> LOL
> George(yes my real name)

1789. Re: 10.7 Mhz IF and HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-03 10:04:14 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <yymg8.11885$106.845712@bgtnsc05-news.ops.worldnet.att.net>
Source record: 45929

I do understand your thinking, Mr Noeding, but I was just using the Drake '4 line as an example. I remember one of the old Allied catalogs talking about the tuning range of the R4 receivers, stating that the unit would cover from 160 to 10 Meters, "save for the range from 5.5 to 6.0Mhz". Anyway, the whole point of this is that manufacturers would generally avoid the I.F. range on their receivers, except for some exceptions as the Collins units that had the variable, and some others. Interesting about the Drake '2 series; I didn't realize that they used a variable I.F. tuning scheme. I've had a few of those units over the years, wondering what the I.F. lineup was, in order to get the triple-conversion tuning scheme. Those were good receivers! Thanks for your input!

Pete KE9OA
Chicago, Il.

J M Noeding <la8ak.xnd@online.no> wrote in message
news:3c8019d8.14882461@news.online.no...
> On Fri, 01 Mar 2002 22:53:10 GMT, "Pete Gianakopoulos"
> <n.gianakopoulos@worldnet.att.net> wrote:
>
> >I've been using a 10.7MHz 1st I.F. for some of my receivers, and as long
as
> >I use a doubly-balanced diode mixer, the spur at 10.7MHz is right around
> >.25uV. When an antenna is connected to the receiver, the spur is masked
in
> >the antenna noise.
>
> Interesting to read
>
> >Now, what Mr. Black did say was correct, especially with some of the
older
> >mixer designs. If this approach was attempted with some of the older
> >topologies, there would be a very high level spur at the I.F. That is
one
> >big reason that the Hallicrafters SX122, and some of their other
receivers
> >with that 1650KHz 1st I.F. omitted that range just above the MW band.
The
> >Drake '4 series was another example of this omission, except in this
case,
> >it was in the 5.465KHz range.
>
> well, not quite. Drake 2-A .... 2-C have 455kHz and 50kHz IF for 80m
> reception, and uses 80M as first IF for other bands. I have never
> experienced spurs on 80m with any of my 2-B's. Using a 4645kHz xtal

> filter (as for R-4) you do not need 455kHz in the chain to convert to
> 50kHz.
>
> I don't see mentioned which coverage is intended, so I will still say
> 455kHz is an optimum IF - at least for frequencies below 4MHz, and the
> solution used is usually sought considering the available sources of
> components. In our case - having douzens of SSB/FM/CW/AM xtal filters
> around for 5.2, 9 and 10.7MHz we might choose different, but still
> application of 4.433, 4, 8 or 3.579MHz xtals in ladder type filters
> might be interesting to try in some applications
>
> At the moment I am experimenting with 60kHz xtal filter for 136kHz RX
>
> 73
> Jan-Martin
> --
> remove ,xnd to reply

1790. Re: REQ: Kenwood KPG-66d, KPG-44

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-03 11:23:13 UTC
From: Hans <"no spam"@nospam.nl>
Message-ID: <3C8207A0.703C9F3A@nospam.nl>
Source record: 45930

nobody@home.com wrote:

> Looking for a source of the wiring for the KPG-46 cable and for the
> programming software KPG-66d
>
> Bob

its very simple,
use good old MAX232 and connect to TRX mic input.
I use this for 3 years.

1791. Baird Polyspec Research Spectromter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-03 16:33:26 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <u84k35dviakce@corp.supernews.com>
Source record: 45931

It's made by Baird Model 987514. I bought it to get the 3kv power supply
but it looks like it might be too good to salvage. Anyone have any info?
tnx
hank wd5jfr

1792. QRP Transceiver Recommendation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-03 19:47:30 UTC
From: Phil Green <philip.r.green@btinternet.com>
Message-ID: <a5tuki$4kk$1@paris.btinternet.com>
Source record: 45942

Hi,
I'm interested in building a 40M QRP transceiver kit. I'm looking for a
reasonably priced unit, not the cheapest. Can anyone recommend one?

Thanks
Phil.

1793. WTB: 1991 or 1990 ARRL Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-03 19:54:10 UTC
From: Bill <newhall@vt.edu>
Message-ID: <a5tuubnbo1@solaris.cc.vt.edu>
Source record: 45932
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I'm doing some research and need an ARRL Handbook from 1991 or 1990.

If you have one sitting on your shelf, make me a deal, (and of course I'll cover shipping on top of that).

If you have both years, make me a deal on both.

Drop me an email at newhall@vt.edu

This is your chance to make room for the 2002 edition!

Bill
newhall@vt.edu

1794. Antenna L & C Loading Components

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-03 19:58:04 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a5u0nl$9rcjm$3@ID-124126.news.dfncis.de>
Source record: 45933

NEWLY AVAILABLE Program "ADDALOAD.exe"
==========

A random length antenna wire may be made resonant at a particular frequency by inserting either a coil or capacitor at any position along its length. For overall wire length, wire diameter and location of the loading component, the program computes either C picofarads or L microhenrys depending on sign of the required loading reactance.

Greatest wire length accepted is 1 wavelength at the resonant frequency. Results apply either to a vertical antenna wire or to both halves of a centre-fed dipole.

The program has an educational facilty to slide the loading component along the wire while observing how it changes value and type.

Download from website below program ADDALOAD in a few seconds and run immediately.

--
****
Regards, Reg G4FGQ
Free Radio Modelling Software
Http://www.g4fgq.com
****

1795. GU-78B tetrode AnyOne home a Amp using this tube?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-03 21:52:43 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3C829B2B.FB74CAC7@charter.net>
Source record: 45934

Hi
I am wanting to start a new project and the GU-78 loked like a good tube
to use.
Anyone built one useing this? Looking for some input.
thanks Chris NI4L

--

NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... <http://www.angelfire.com/nb/ni4l/>

1796. Re: HF transceiver miniature

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 02:59:03 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <XpBg8.12657$gK2.924650@bgtnsc04-news.ops.worldnet.att.net>
Source record: 45935

Mini-Circuits has some surface mount mixers, that have a small form factor; these are the RMS series and the ADE series. A good I.F. subsystem is the Phillips TDA1572; this device does come in a surface mount version. If you wanted to go with a bilateral I.F. subsystem, this would not be the device of choice, but if you were to have a seperate Rx I.F. strip, it should do fine. I've been using it after the 2nd conversion, with good results. Those other devices that Eamon mentioned are also very good.

Pete KE9OA

Eamon Skelton <Xnospam@oceanfree.net> wrote in message news:8g6b5a.7ue.ln@my.linux.box...
> In article <3c78b099$0$9073@echo-01.iinet.net.au>, Richard Hosking wrote:
>
>
> > Physically small/portable for walking/backpack
> > Surface mount components
>
> OK for the young-un's with good eyesight.
>
> > Reasonable strong signal handling
>
> High-level mixer. diode ring, passive mosfet mixer (H-mode)
> or high-level IC mixer (AD831).
>
> > CW/SSB modes (not AM/FM)
>
> That makes life a lot easier. How about a 6 or 8 pole
> ladder filter made from 10 MHz CPU clock crystals?
>
> > components reasonably easily available/cheap!
>
> See above.
>
> > Current drain low on receive
>
> LCD display instead of LED.
>
> > 3-5W out
>
> CB PA transistor.
>
>
> > A conventional single conversion superhet seems like the best idea with an

> > IF of ?10.7 MHz, with filter type SSB generator using a balanced
> > diode/filter setup (simple and carrier suppression is not critical)
>
> http://homepage.eircom.net/~ei9gq/amp-mod.html works very well
> for me.
>
> > (2) important components
> > Power amp transistors
>
> CB PA transistors - I don't know what they use in modern CB's,
> The 2SC1969, 2SC1307 and 2SC1945 were popular choices in
> the old days.
>
> > Mixer
> > I am not sure what is available in SM
> > A TUF-1 from minicircuits would give reasonable SS handling but would
> > require more LO drive
>
> Sounds good. Check www.analog.com for IC mixers.
>
> > IF amp
> > The venerable MC1350 still seems not a bad choice but can you get it in
SM?
>
> The MC1350 is still available. I believe they are no longer in
> production so stocks will dry up eventually. I think there is a SM
> version but I've never seen one.
>
> > Is there a better choice with AGC?
>
> I don't like to recommend something I haven't tried myself but
> have a look at the AD603. I have heard good reports about them
> from some of the folks on the UK homebrew net (3.727MHz).
>
> The National Semiconductor CLC520 is another one worth
> looking at.
>
> I have data-sheets for both, if you can't find them on the
> web.
>
> > Filter
> > I thought I would use a conventional monolithic filter as a simple
solution.
>
> If you can find one at a reasonable price. Check Aleksander Stare's
> web-page for some homebrew ladder filter designs. There is a link
> on my page. See below.
>
> > LO
> > I will use a free running VFO with crystal osc mixer/BPF for each band.

The
> > VFO will be stabilized by my counter/PLL module
>
> Sounds good. If you are using the usual 5-5.5MHz approach, a
> DDS might be a better approach, especially for mobile use.
>
> > I would be grateful for any feedback
> >
> > Richard
>
> And we look forward to hearing more about your progress.
>
> VY 73, Ed. EI9GQ.
>
> --
> Remove 'X' to reply.
> http://homepage.eircom.net/~ei9gq
> Linux 2.4.17

1797. FS: 4 JOHNSON Caps/Rollers that need repair!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 03:00:53 UTC
From: rlucch2098@aol.com
Message-ID: <20020303220053.26890.00001566@mb-ma.aol.com>
Source record: 45936

Hi Guys;
After going thru all my boxes-O-Stuff, I came across these 4 E.F. Johnson items that need TLC but are quite reparable!
I have no time or workspace to work on them.
1- Johnson 229-0203-001 Roller, 25uh, Used, Nice but needs from Bearing repair!
2- Johnson 229-0201-001, 10uh roller, Looks unused but has a light crack on one corner of the ceramic insulation, acroos the Long Bolt hole, Can be left as is, seems still strong!
3-Johnson 154-32 Used Air Variable, 30-300pf? Not sure. Used, needs 1 end ceramic end replaced with a Plexiglass copy, A few saw cuts, some filing & 4 holes, easy!
4- Johnson 132-502(#15-147) Dual Section Air Variable, Unused, 150 pf Ea. @ 3500v. Both ceramic ends need to be copied & replaced. But that hard to copy in Plexiglass, needs some patience & time, Very Costly if no repair was required :-)
Here is a Picture>>

http://www.baltimorepress.com/~wa2rqy/4johnsons.jpg
Price is $50 + UPS or US Mail(abt 5 lbs).
Thanks es 73....Rich WA2RQY (1961)
WA2RQY's "confusion Radio" Web-Page
Http://members.aol.com/rlucch2098/index.html
RLUCCH2098@aol.com
"Keep those heaters on"

1798. Re: HF transceiver miniature

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 03:02:27 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <7tBg8.12666$gK2.922596@bgtnsc04-news.ops.worldnet.att.net>
Source record: 45937

I would probably use the 9851, if low current drain is desired. The 9852 is cleaner, but much higher current. I have used the 9851 for a couple of years, and it isn't too bad, but still, it is not as clean as a PLL design. Many in-band artifacts.

Pete KE9OA

Eamon Skelton <Xnospam@oceanfree.net> wrote in message news:daae5a.26g.ln@my.linux.box...
> In article <3c7a284a$0$11655@echo-01.iinet.net.au>, Richard Hosking wrote:
>
>
> > AD831 somewhat expensive
> > Where can I find the circuit for the H mixer?
>
> It was published in the RADIO COMMUNICATION HANDBOOK (RSGB). I don't
> have the book but I have got a reasonably good photocopy of the circuit.
> I can't use my scanner at the moment, I'll see if I can get a good
> shot of it with my digital camera.
>
> Also, have a look at Charlos Potma's web-page. See my links page.
>
>
> > I may even try a discrete solution using DG MOSFETs
>
> I had a pair of mosfets in one of my rigs. They have
> plenty of gain and very very low noise. I found it
> difficult to get reasonable AGC characteristics with
> the circuit I used. MK-II has got a DG FET as the
> first IF amp and an MC1350 as the second IF. This
> combination works really well.
>
> http://homepage.eircom.net/~ei9gq/ifamp.html
>
>
> >> If you can find one at a reasonable price. Check Aleksander Stare's
> >> web-page for some homebrew ladder filter designs. There is a link
> >> on my page. See below.
> >
> > I will check this. What about carrier/BFO crystals?
>
> You might be able to use the same crystals for the BFO/CIO.
> It is quite easy to pull a crystal down by a couple
> of KHz by putting a little inductance in series with it.
> It's not as easy to pull them up in frequency.

>
>
> > DDS takes too much current though it is certainly simpler once you have
the
> > board - no need for mixers/filters etc for the L:O
> > What about spurs - how do these perform in a European situation with
lots of
> > strong local signals on say 7 MHz?
>
> I don't have one myself so I'm not really qualified to answer. If you
> use a high clock frequency, a relatively low LO frequency and a good
> LPF of BPF on the DDS output, the spurs should be quite low. If you
> want the DDS to directly generate the LO signal for the higher HF
> bands, then I would expect fairly high spurs on the LO.
>
> I really must get around to buying some DDS chips. Is the AD9850 still
> the best one to start with?
>
> 73, Ed. EI9GQ.
>
>
>
> --
> Remove 'X' to reply.
> http://homepage.eircom.net/~ei9gq
> Linux 2.4.17

1799. FS_ TWO(2) NOS ERIE 500pf @ 30KV Doorknobs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 03:02:42 UTC
From: rlucch2098@aol.com
Message-ID: <20020303220242.26890.00001570@mb-ma.aol.com>
Source record: 45938

Hi Guys;
TWO(2)Brand new, $24.00ppd & shipped priority Mail>>

http://www.baltimorepress.com/~wa2rqy/doorknobs1.jpg

Thanks es 73....Rich WA2RQY (1961)
WA2RQY's "confusion Radio" Web-Page
Http://members.aol.com/rlucch2098/index.html
RLUCCH2098@aol.com
"Keep those heaters on"

1800. Completely OT : Homebrew a Jet-Pak ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 04:33:54 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c82f80c.530810470@news.erols.com>
Source record: 45939

Howdy,

I know, I know, completely wacky. But I've slavered for one of these since the sixties. Saw one demonstrated once live many, many moons ago. Has anyone ever built one? Possible ? If anyone has any leads on these "blasts from the past" I'd sure appreciate a pointer.

Thx. es 73 de KG4JBM / Andrew
Reticulum

Remove "your.hat" when replying via e-mail

1801. Re: UK Component Suppliers List

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 09:14:31 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.com>
Message-ID: <gSZu9ZD3rzg8EAtj@ifwtech.com>
Source record: 45946
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Andy Holmes wrote:
>Yup, RS certainly are still in business - www.rswww.com
>regards
>Andy Holmes - G6VTR
>andrew.holmes1@btinternet.com

RS are not welcoming orders from private individuals any more. The Electrovalue retail operation closed about two years ago. I checked this with RS a few weeks ago, and their policy is now "business to business". In other words they have gone back to their old "Trade only" policy.

You can use the RS web site for private credit-card orders, but even that facility is primarily intended for use by account customers when they can't get a formal order number. It's the online equivalent of sneaking in to the RS Trade Counter with a "cash order".

In contrast, Farnell are very happy to accept individual credit-card orders, will take your order by phone, charge essentially the same prices as RS, and have free delivery on orders over ï¿½10.

Further details are on the 'In Practice' list of UK component and tool suppliers, at http://www.ifwtech.com/g3sek/in-prac/components.htm

I try to keep the list up-to-date and useful, so all suggestions and recommendations are very welcome.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.com/g3sek

1802. Re: Super Regen (colpitts)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 09:47:39 UTC
From: kargokult@aol.comjokeaol
Message-ID: <20020304044739.01960.00001466@mb-cn.aol.com>
Source record: 45943

You definitely need to find the QEX
article of a year or two back. The
author investigated improving the
superregen's notorious poor selectivity
by controlling the waveform of the
quench voltage.
I note also that Radio Electronics for
Oct 1969 (i don't have it) had a short
paragraph on a 2-FET multivibrator
circuit superregen operating on about
10-20 meters.
Hue

1803. Need manual RCA WT-524A trans. tester

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 09:52:11 UTC
From: kargokult@aol.comjokeaol
Message-ID: <20020304045211.01960.00001468@mb-cn.aol.com>
Source record: 45944

This is nice looking instrument and i sure would like to buy a copy
or original of the manual, or appreciate any leads. This is an
RCA transistor & FET tester.
Tnx, Hue Miller

1804. DBM SMA2000 spec sheet ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 11:01:27 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c83527e.3485328@news.freeserve.net>
Source record: 45945

HI Folks, Mainline (UK electronic bits supplier) has some SMA2000 ring mixers, they look like Mini-Circuits SBL-1 style encapsulation. Anyone got spec on these beasties?.
They also have SL560C at 7 for 5 ukp, and S-AV7 and M57729H RF PA bricks SAV's are 2 for 30 quid, M57729H's are 28 quid each.
I'll be pleased to order and forward should anyone EX-UK wish to buy some.
atb Mike W, G8NXD, M3MSM qthr

1805. Re: Sound Card Programming

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 12:59:42 UTC
From: John Hague <John.Hague@philips.com>
Message-ID: <3C836FBE.E7AADC9C@philips.com>
Source record: 45847

Mike Andrews wrote:

> _Which_ "this site"?
>
> deyoreo@re.ray.com wrote:
> : This site will show how to use C++ to use the soundcard to fill a
> : buffer. From there, you'll need an FFT and a plot routine. I've got
> : them in C++ if you want.
> : On Fri, 1 Mar 2002 10:02:35 +0000 (UTC), Joe McElvenney
> : <ximac@btinternet.com> wrote:
>
> --
> I had occasion to write today, "Best viewed through the bottom of a
> beerglass" about a website that had another one of those binary
> Windows-only plugins.
> Paul Martin, in the Monastery

Sounds like www.relisoft.com to me

Hope this helps

John Hague, G4GOY

1806. Re: Visual Basic and Sound Cards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 13:36:44 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0203040536.1274cc1c@posting.google.com>
Source record: 45848

Finally!!!

Someone who read and understood my question! It amazes me how many
people do not do that before answering a post.

Thank you very much, Mike!

The book "Writing Excel Macros" by Steven Roman (O'Rielly Press, 1999
ISBN 1-56592-587-4) has two whole chapters on the Visual Basic
Editor. I have not digested the book yet, so I am not sure what the
differences are between VBA and VB.

Jim
N8EE

wb3fup@webtv.net (Mike Hall) wrote in message
news:<1617-3C7FAD1C-322@storefull-108.iap.bryant.webtv.net>...
> Jim
> To be playing in Office (Excel) you have to use VBA (Visual Basic for
> Applications). It is the usual conundrum of computeing, it is the same
> thing as VB but vastly different. If Bill and his magic crew did not
> concieve of the fact that anyone ever wud ever want to do what you want
> to it probably can't be done.
>
> VB will let you access the sound card - you say and I believe you - but
> VBA may not. And VBA is the language that is used to automate, and
> custom design user applications based on Office applications.
>
> 73 es cul
>
> wb3fup
> a salty bear

1807. Re: QRP Transceiver Recommendation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 13:42:44 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3C8378D2.CF46E675@gte.net>
Source record: 45849

Phil Green wrote:

> Hi,
> I'm interested in building a 40M QRP transceiver kit. I'm looking for a
> reasonably priced unit, not the cheapest. Can anyone recommend one?
>
> Thanks
> Phil.

Look at the Elecraft K1- you can purchase it with a 2 band or 4 band module.
Their electrical design is awesome and support is excellent.
You will not regret it.
Dale W4OP

1808. Re: MM5314 Clock Chip data sheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 14:14:00 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <a5vvhh$ad7c6$1@ID-61331.news.dfncis.de>
Source record: 45850

>
[...]
>
> I am working on a (sorry guys, please don't gag) a Nixie clock. After I
posted
> the data sheet request, I realized this wasn't a BCD clock. I still would
like
> the data sheet for reference.

If you're not already, you should join the NEONIXIES-L Yahoo group. I built
a Nixie clock http://www.hanssummers.com/electronics/clocks/nixie/index.htm
using a design like this one http://www.netcomuk.co.uk/~wwl/nixclock.html

73's

--

Hans Summers
http://www.HansSummers.Com

>
> 73s.
>
> Clyde
> KA1CRV
>

1809. Re: UK Component Suppliers List

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 14:21:16 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <a5vvv7$ah8ld$1@ID-61331.news.dfncis.de>
Source record: 45851
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

[...]
>
> In contrast, Farnell are very happy to accept individual credit-card
> orders, will take your order by phone, charge essentially the same
> prices as RS, and have free delivery on orders over £10.

Disagree! Farnell are often MUCH cheaper than RS. Their website is crap
though. Get the free catalogue, tel 0870 1200 200.

Hans Summers
http://www.HansSummers.Com

1810. FS- B&W FC-15A Fil. Choke

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 16:01:54 UTC
From: Byron Tatum <bjtatum@ev1.net>
Message-ID: <3c83999a_1@newsa.ev1.net>
Source record: 45852

FOR SALE- B&W FC-15A Fil. Choke 20.00 plus shipping.

1811. Re: Baird Polyspec Research Spectromter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 17:05:30 UTC
From: dunnt@its.caltech.edu
Message-ID: <dunnt-0403020905450001@dhcp-40-164.caltech.edu>
Source record: 45853

In article <u84k35dviakce@corp.supernews.com>, "Henry Kolesnik"
<wd5jfr@oklahoma.net> wrote:

>It's made by Baird Model 987514. I bought it to get the 3kv power supply
>but it looks like it might be too good to salvage. Anyone have any info?
>tnx
>hank wd5jfr

Hers is a start for info

http://www.world.std.com/~tjabaird/

Tom WB6IQD

1812. Re: HF transceiver miniature

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 18:20:31 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <ftd06a.45t.ln@my.linux.box>
Source record: 45854

In article <7tBg8.12666$gK2.922596@bgtnsc04-news.ops.worldnet.att.net>, Pete Gianakopoulos wrote:
> I would probably use the 9851, if low current drain is desired. The 9852 is
> cleaner, but much higher current. I have used the 9851 for a couple of
> years, and it isn't too bad, but still, it is not as clean as a PLL design.
> Many in-band artifacts.
>
> Pete KE9OA

Thanks for the info Pete. I'm planning to build a new rig for
2M. I was thinking of using a PLL with the VCO output mixed with
a crystal oscillator and locked to VFO running at 4 to 6MHz to
cover 144 to 146 MHz. A DDS might be a good way of generating the
4 to 6 MHz signal.

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

1813. Help with T/R Relay Please (newbie)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 18:50:54 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c83bfcd.581956604@news.erols.com>
Source record: 45855

Greetings,

Just picked up a IC-756. I already have an older FL2100-B amp.
I want (need) to install some kind of relay to protect the Icom but I'm a
newbie to homebrew. I've tried looking at some of the web-sites but there
are a LOT of them, most not well indexed. So I'm looking for a clear pointer
of set of specs and clear instructions by e-mail or reply here. I'm just asking
that you don't just say " go to xx0xxx's site, he has tons." I know you can buy

them from MFJ. I'd like to try building my own (with help). Please accept my
thx. in advance.

73 de KG4JBM

Reticulum

Remove "your.hat" when replying via e-mail

1814. Re: Sound Card Programming

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 19:02:52 UTC
From: deyoreo@re.ray.com
Message-ID: <3c83c4c6.26373437@proxy.res.ray.com>
Source record: 45856

sorry. here http://sdeyoreo.tripod.com/
On Fri, 01 Mar 2002 15:39:36 GMT, deyoreo@re.ray.com wrote:

>This site will show how to use C++ to use the soundcard to fill a
>buffer. From there, you'll need an FFT and a plot routine. I've got
>them in C++ if you want.
>On Fri, 1 Mar 2002 10:02:35 +0000 (UTC), Joe McElvenney
><ximac@btinternet.com> wrote:
>
>>Hello,
>>
>> I wonder if anyone has any pointers to sites, books,
>>source code listings, etc., on the subject of sound card
>>programming. I am thinking of starting a spectrum analyzer
>>project (half software, half hardware based) and wonder if
>>the sound card might be a more convenient port to my PC
>>rather than the usual USB/parallel/serial way in, as well
>>as being a useful DSP resource.
>>
>> Any help would be appreciated. I have already started a
>>web search but am unlikely to find every nook and cranny.
>>The existence of top grade software like "MMTTY" tell me
>>that the info must be out there somewhere.
>>
>>
>> 73 de G3LLV, Joe
>>
>>
>

1815. Re: MM5314 Clock Chip data sheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 19:37:30 UTC
From: k7itm@aol.com
Message-ID: <3200347.0203041137.1a71a363@posting.google.com>
Source record: 45857

"Clyde R. Shappee" <cshappee@ieee.org> wrote in message
news:<3C818E09.422DAEBE@ieee.org>...
...
> I am working on a (sorry guys, please don't gag) a Nixie clock. After I posted
> the data sheet request, I realized this wasn't a BCD clock. I still would like
> the data sheet for reference.

Well, the data sheet covers four parts, some of which do have BCD
output. There are also some other MM53xx clock chips that have BCD
outputs. Guess you'll have to latch those and drive 7441's or equiv.
for your Nixies. -- Will you be wanting one of the BCD-output chips?

Cheers,
Tom

1816. Re: What is cases as Homebrew?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 20:53:17 UTC
From: tongaloa <tongaloa@alltel.net>
Message-ID: <a60mulsmg1@iac5.navix.net>
Source record: 45858

If you understand the engineering to the point that you are not surprised
when it works, then it's homebrew :-)

-t

1817. Re: Completely OT : Homebrew a Jet-Pak ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 21:36:37 UTC
From: "F. Feeney" <fkf1@cornell.edu>
Message-ID: <a60pd5$e87$1@news01.cit.cornell.edu>
Source record: 45859

Subject: Completely OT : Homebrew a Jet-Pak ??
From: Reticulum, Cathexis@yourhaterols.com
Date: Mon, 04 Mar 2002 04:33:54 GMT
In article <3c82f80c.530810470@news.erols.com> Reticulum,
Cathexis@yourhaterols.com writes:
>Howdy,
>
> I know, I know, completely wacky. But I've slavered for one of
these
>since the sixties. Saw one demonstrated once live many, many moons ago.
>Has anyone ever built one? Possible ? If anyone has any leads on these
>"blasts from the past" I'd sure appreciate a pointer.
>
> Thx. es 73 de KG4JBM / Andrew
> Reticulum
>
>Remove "your.hat" when replying via e-mail

I knew a fellow who'd retired from Bell Aerospace over in Buffalo years back and we spent an afternoon talking about those things. He'd worked on both the rocket pack, which had a 60 second endurance, and the jet pack which had a half hour endurance.

He said the rocket pack was really a pretty simple design. It was a hydrogen peroxide rocket, using pretty pure hydrogen peroxide as the single fuel, and a simple silver grid catalyst in the engine neck to 'fire' it. I think the pressurization was with some compressed air to pump the fuel.
The tank and nozzle were mounted to an articulated frame that strapped on the user, and would allow you to swing the nozzle around using a pair of handles. There was a twist grip I think to control the rate of feed of the fuel to the catalyst and nozzle. The fuel was sufficient for about 60 seconds, and there was a beeper that sounded under the helment when there was 10 seconds of fuel remaining.

According to him, they recruited the people to fly it from the nearby University of Buffalo, mostly athletic folks like football players. There wasn't a lot of training other than trying to hover low and do short hops, and he said the only injury in the program was when one of the pilots at a demonstration was waving to the crowd from a raised platform from which he was supposed to take off and fly, and he wasn't paying attention and stepped backwards off the platform while waving.

The original impetus for the design was for troops doing a landing ala the beaches of Normandy. Instead of having to slog their way up the beach

through a hail of bullets, the hope was they could all fly the last 100 yards or so, and leap over entrenched positions.

There was a version that had a small turbine that ran on JP4 or maybe avgas, and it had a 30 minute endurance but he said it was so noisy it was unbearable to be around.

Where did you see one fly? I know they used to do them at football games and such, flying the length of the field. I remember seeing films of that, and of someone flying over a 10 story building. He said that was a bit tricky as you had to have enough fuel left to stop coming back down and it was easy to miscalculate.

Hope that fed your interest.

73 de Kevin, WB2EMS

1818. F.S. Parts, etc.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 22:09:34 UTC
From: Lou <tech@dp.net>
Message-ID: <a60slr$22ht$1@news.dp.net>
Source record: 45860

For Sale:

Lots of parts, tubes, grab bags, oddball stuff. New parts, good circuit pulls, over stocks, some parts maybe no longer found elsewhere. Looking to clear it all out. IF looking for something to start or finish your homebrew project, give me a yell. I may have it. Even have some electrical stuff. MOST is going dirt cheap!

Also, have a couple cases and cabinets from older equipment, maybe good for your projects. These are going cheap also.

If I don't have it today, I may have it tomorrow. Keep my ad handy just in case. OR pass it along to your friends.

See below for terms of sales.

--
Lou
Owner of: C.L. FURLONG ENTERPRISES

Home of "Gifts and More" & "Electronics Plus"

Gifts & Fundraisers - Info upon request

Electronics sales and service, FCC licenses.
Save on your experimenting. Buy for less. Private internet auctions
Grab bags, surplus, etc. E-mail pictures of items available.

Accept only Postal MOs by mail. "Cash" and carry on site.
Unless otherwise stated, shipping is "extra".

514 Railroad Street
P.O. Box 289
Stockdale, PA 15483

Phone 724-938-7808
E-Mail: Tech@DP.NET
Hours: M-F 9-5 - S/S by appt.
Closed on Holidays

1819. Re: QRP Transceiver Recommendation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 22:52:12 UTC
From: Bob Nielsen <nielsen@remove_this.oz.net>
Message-ID: <a60tqsth0@216.39.144.81>
Source record: 45861

I suggest you consider the RH-40 from Red Hot Radio
(http://www.redhotradio.com). The web site hasn't been updated since
they temporarily stopped production, however, but you can probably find
out via email. I have the 20 meter version and the receiver portion
outperforms my TS-570. The built-in keyer and frequency annunciator
are nice features. If you are interested in a multiband rig, the
Elecraft K-1 and K-2 are very good choices (http://www.elecraft.com).

Bob, N7XY

On Sun, 3 Mar 2002 19:47:30 +0000 (UTC), Phil Green wrote:
> Hi,
> I'm interested in building a 40M QRP transceiver kit. I'm looking for a
> reasonably priced unit, not the cheapest. Can anyone recommend one?
>
> Thanks
> Phil.

1820. Electrolytic Capacitor Polarity Identification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 22:57:25 UTC
From: "Jim Hill, w6ivw" <XXslimjimis@cox.net>
Message-ID: <bau78uk37o8l1krcufh5vjabc274kdi13h@4ax.com>
Source record: 45862

I just purchased some axial Xicon electrolytics from Mouser, and there are no obvious polarity markings. The case is indented at one end, and there is a stylized band that could be considered an arrow going from the indented end to the other end.

No information is given on Xicon's web site, but noticed the radial electrolytics have one lead shorter than the other.

How is polarity identified?

Thanks, Jim

1821. TRANSMITTER POWER SUPPLY PROBLEMS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 22:59:46 UTC
From: djnicad@hotmail.com
Message-ID: <ec5747bc.0203041459.3712a392@posting.google.com>
Source record: 45863

Ive got some problems with a power supply that I built from the
following page:

http://www.aaroncake.net/circuits/supply.htm

I'm building a transmitter that needs about 4 to 4.5 amps to be
supplied from the supply to power the different components
correctly, so I thought that this would be o.k to power everything.
When I had built it, to test it out I set the voltage on the
supply to 12Volts and connected a 20Watt/12v (1.66 Amps) light bulb
across the supply terminals to see if it worked... no problem, it
powered the bulb nicely.
The problems started when I connected (in parallel) another 20Watt
lamp across the terminals (40Watts in total/3.33Amps). Both lights
go very dim for a second (slow start up protection?), they then
reach full brightness (12v) for about 3 seconds, after this the
bulbs rapidly dim till they reach a low level.
I know that the LM338K features current limiting as protection for
the I.C, which is what I believe is happening when I connect the
second bulb. What I can't work out is why this is happening when Im
only connecting a load which is roughly 2/3rds of the rated output
current of the I.C (5amps).
I built the supply using all the specified components in the parts
list, I mounted the I.C to a large (oversize) heatsink with a mica
washer and used a 12v fan to blow onto the sink to keep it really
cool. I used a torodial transformer rated at 225VA (oversize) to
provide the A.C.
Ive tried changing the bridge rectifier, just incase the original
was faulty but it hasn't changed anything. Do you guys think I
have a faulty LM338K regulator?
Can anyone also tell me if the components specified in the supply
schematics are right? (to produce the full 5 amps).
Any help would be greatly appreciated.

Thanxs

1822. Re: MM5314 Clock Chip data sheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 23:04:07 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C83FD67.19019CF7@ieee.org>
Source record: 45864

Well, I have a 5314 that drives 7 segment, and have considered making a CPLD or PAL that goes
backwards from 7 segment to BCD.... I likely wont use the chip in the new clock. Still desire
the data sheet.

But in 2 hours yesterday I did the entire BCD clock design for a CPLD..... It has features that
I really like that I implemented years ago in a microprocessor system in that:

you my change the hours without affecting the seconds,
you can advance the time or make it go backwards easily during setting, hours
independently of minutes.

As for the nixie chat group, Hans, is this a yahoo chat or a usenet News group? If it is a usenet group, what is the proper name for the group?

Hans, thanks for the links....

Clyde
KA1CRV

Tom Bruhns wrote:

> "Clyde R. Shappee" <cshappee@ieee.org> wrote in message
news:<3C818E09.422DAEBE@ieee.org>...
> ...
> > I am working on a (sorry guys, please don't gag) a Nixie clock. After I posted
> > the data sheet request, I realized this wasn't a BCD clock. I still would like
> > the data sheet for reference.
>
> Well, the data sheet covers four parts, some of which do have BCD
> output. There are also some other MM53xx clock chips that have BCD
> outputs. Guess you'll have to latch those and drive 7441's or equiv.
> for your Nixies. -- Will you be wanting one of the BCD-output chips?
>
> Cheers,
> Tom

1823. Re: Electrolytic Capacitor Polarity Identification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 23:42:51 UTC
From: -Your Friend Bill- <none@coqui.net>
Message-ID: <3C84067B.8EA84DBC@coqui.net>
Source record: 45865

"Jim Hill, w6ivw" wrote:
>
> I just purchased some axial Xicon electrolytics from Mouser, and
> there are no obvious polarity markings. The case is indented at one
> end, and there is a stylized band that could be considered an arrow
> going from the indented end to the other end.
>
> No information is given on Xicon's web site, but noticed the radial
> electrolytics have one lead shorter than the other.
>
> How is polarity identified?
>
> Thanks, Jim

Most of the ones like that have the arrow band pointing to the neg end.
-Bill

1824. Re: Randy Rhea's HF Filter Design Book

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 23:45:26 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3C840716.E17950D5@sympatico.ca>
Source record: 45867

check out the ansoft web site. You can down a student version of their simulators, which should do nicely for filter simulation.

Peter Bolch wrote:

> Hi
>
> I'm looking for a filter design book and think of buying Randy Rheas's book
> "HF Filter Design and Computer Simulation". Is this book useful if one does
> not have access to Rheas's Eagleware simulation program? So, can I build the
> filters described in the book without using the simulator?
>
> Peter

1825. Re: Electrolytic Capacitor Polarity Identification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 23:46:15 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u881p9bid10c66@corp.supernews.com>
Source record: 45866

There should be a large arrow running vertically top to bottom on one side.
Look inside that arrow and see if you can't make out the (-) sign. The
arrow points to the negative lead. Don't trust short-long leads as somebody
could have clipped one somewhere along the way.

Jim

"Jim Hill, w6ivw" <XXslimjimis@cox.net> wrote in message
news:bau78uk37o8l1krcufh5vjabc274kdi13h@4ax.com...
> I just purchased some axial Xicon electrolytics from Mouser
>
> How is polarity identified?

1826. Re: HF transceiver miniature

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 23:46:47 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3C840767.C1D65A3@sympatico.ca>
Source record: 45868

Their is a surface mount version of the MC1350P.
bk.

Eamon Skelton wrote:

> In article <3c78b099$0$9073@echo-01.iinet.net.au>, Richard Hosking wrote:
>
> > Physically small/portable for walking/backpack
> > Surface mount components
>
> OK for the young-un's with good eyesight.
>
> > Reasonable strong signal handling
>
> High-level mixer. diode ring, passive mosfet mixer (H-mode)
> or high-level IC mixer (AD831).
>
> > CW/SSB modes (not AM/FM)
>
> That makes life a lot easier. How about a 6 or 8 pole
> ladder filter made from 10 MHz CPU clock crystals?
>
> > components reasonably easily available/cheap!
>
> See above.
>
> > Current drain low on receive
>
> LCD display instead of LED.
>
> > 3-5W out
>
> CB PA transistor.
>
> > A conventional single conversion superhet seems like the best idea with an
> > IF of ?10.7 MHz, with filter type SSB generator using a balanced
> > diode/filter setup (simple and carrier suppression is not critical)
>
> http://homepage.eircom.net/~ei9gq/amp-mod.html works very well
> for me.
>
> > (2) important components
> > Power amp transistors
>
> CB PA transistors - I don't know what they use in modern CB's,

> The 2SC1969, 2SC1307 and 2SC1945 were popular choices in
> the old days.
>
> > Mixer
> > I am not sure what is available in SM
> > A TUF-1 from minicircuits would give reasonable SS handling but would
> > require more LO drive
>
> Sounds good. Check www.analog.com for IC mixers.
>
> > IF amp
> > The venerable MC1350 still seems not a bad choice but can you get it in SM?
>
> The MC1350 is still available. I believe they are no longer in
> production so stocks will dry up eventually. I think there is a SM
> version but I've never seen one.
>
> > Is there a better choice with AGC?
>
> I don't like to recommend something I haven't tried myself but
> have a look at the AD603. I have heard good reports about them
> from some of the folks on the UK homebrew net (3.727MHz).
>
> The National Semiconductor CLC520 is another one worth
> looking at.
>
> I have data-sheets for both, if you can't find them on the
> web.
>
> > Filter
> > I thought I would use a conventional monolithic filter as a simple solution.
>
> If you can find one at a reasonable price. Check Aleksander Stare's
> web-page for some homebrew ladder filter designs. There is a link
> on my page. See below.
>
> > LO
> > I will use a free running VFO with crystal osc mixer/BPF for each band. The
> > VFO will be stabilized by my counter/PLL module
>
> Sounds good. If you are using the usual 5-5.5MHz approach, a
> DDS might be a better approach, especially for mobile use.
>
> > I would be grateful for any feedback
> >
> > Richard
>
> And we look forward to hearing more about your progress.
>
> VY 73, Ed. EI9GQ.

>
> --
> Remove 'X' to reply.
> http://homepage.eircom.net/~ei9gq
> Linux 2.4.17

1827. Re: TRANSMITTER POWER SUPPLY PROBLEMS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-04 23:58:47 UTC
From: "G. Skiffington" <skiffing@nbnet.nb.ca>
Message-ID: <3C843F4F.14B8@nbnet.nb.ca>
Source record: 45870

Howdy......Looks like a neat little power supply you've built there. I believe you are seeing 2 seperate problems that manifest in the same manner (and I'll offer a couple of suggestions to improve this). I wasn't familiar with the LM338K but studied the datasheet for it and noted that (like many regulators) the 5A maximum rating is available only when the difference between the input voltage and the output voltage is 10 volts or less (preferable)....(Pd of 50W = 10V x 5A therefore if you have a differential of say 17V then you'd only have a current capability of 2.94A = 50W). It's important (and often neglected) to keep the input (unregulated) voltage as low as possible and still satisfy the minimum differential voltage required for regulation (LM338K shows 1.25 volts....therefore for 12.0 output you'd only require 13.25 volts input....anything higher just increases the heat dissipated by the regulator). I "suspect" that your input voltage is likely nearer to 35 volts, especially in light of the heavy transformer you used (you might let us know). IF this is the case then your power supply will have a corresponding lower current capability, depending on what you've dialed up for output voltage (lower output voltage = lower current capability due to increased Pd of the regulator).....make any sense?

The second problem I see happening during your 2 x 20W lightbulb load test is this......(assuming you used incandescent lights here): Bulb filaments are lower resistance when cold and therefore draw more current when initially turned on (measure this especially with an analogue meter and you'll see what I mean). Bulbs are pretty nominally rated so your actual current, even hot might be somewhat different by the way (your math is good though!).

So....what I see happening during your tests is this (if my guestimation of your input voltage is ballpark close): During your 1 bulb test you didn't exceed either the maximum current OR the maximum Pd of the regulator and it worked ok.........During the 2 bulb test, initially you may have exceeded the maximum current of the regulator while the bulbs were lighting (caused a momentary cutback) and THEN as the bulbs drew a steady current, likely exceeded the Pd of your regulator (causing it to cutback as the temperature climbed inside the regulator).

What I'd suggest (and have had to do) is to: 1. Insert a 2 ohm 100 watt resistor between your bridge rectifier and your regulator (this will cause a 10 volt drop in the unregulated side @ 5 amps hopefully still keeping your input above 13.3 if you desire 12.0 out....or calculate as required). 2. Lower your input voltage by other means....if you have any line voltage adjustment taps on the primary side, set the tap to the highest voltage position OR change to a lower

output transformer (15 to 18 vac maybe @ rated current). 3. Install an additional NPN pass transistor (or 2) between your bridge output and your load terminals and drive its base with your existing regulator's output....heatsink the pass transistor(s) accordingly.....this solution will work well with your circuit as you have the capability to adjust the voltage to compensate for the additional junction.

Hope this helps.

Gord - VE1AJF

1828. Re: Electrolytic Capacitor Polarity Identification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-05 00:03:17 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <3c840a9f$1_2@newsa.ev1.net>
Source record: 45871

The end with the rubber plug is almost always +

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Jim Hill, w6ivw" <XXslimjimis@cox.net> wrote in message
news:bau78uk37o8l1krcufh5vjabc274kdi13h@4ax.com...
> I just purchased some axial Xicon electrolytics from Mouser, and
> there are no obvious polarity markings. The case is indented at one
> end, and there is a stylized band that could be considered an arrow
> going from the indented end to the other end.
>
> No information is given on Xicon's web site, but noticed the radial
> electrolytics have one lead shorter than the other.
>
> How is polarity identified?
>
> Thanks, Jim

1829. Re: Completely OT : Homebrew a Jet-Pak ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-05 00:04:50 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c8406c8.533544@news.erols.com>
Source record: 45869

Nice reply, Kevin.

It was a long time ago, 35+ years easy. As I recall, my old man, who worked at Langley outside Wash.,D.C., took my brother and I with him over to the Naval Surface Warfare bldg over in suburban MD. and it was over there that we "happened" to see a Demo in a parking lot with really not much of anyone around. I have no idea why we were there in the first place.

My pop claims not to remember it. However he did admit 30 years after he left the Agency that he did go through full training down at Camp Perry. Apparently, he also may have put those skills to work when I was still very young. Frankly, things are blurry and he doesn't always confirm what I remember growing up, or sometimes comes up with something totally different. If you aren't familiar with those place names the internet may provide more.

Regardless, I really liked the history you through in there. I had no idea "college kids" ever flew these things. I thought it was all military and test pilots. I'm not a pilot, but as I recall , and based on what you said Jet-Paks could do, you really shouldn't need a pilot's license. Maybe just a License to Kill (Hi, Hi.) Did you and your friend ever talk about building one ?

Andrew
Reticulum

Remove "your.hat" when replying via e-mail

1830. Re: Help with T/R Relay Please (newbie)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-05 00:05:28 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <3c840b22_2@newsa.ev1.net>
Source record: 45872

Stop in on my webs site; www.qsl.net/kk5dr
I have a circuit for a relay interface on most ICOM HF rigs.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Reticulum" <Cathexis@yourhaterols.com> wrote in message
news:3c83bfcd.581956604@news.erols.com...
> Greetings,
>
> Just picked up a IC-756. I already have an older FL2100-B amp.
> I want (need) to install some kind of relay to protect the Icom but I'm a
> newbie to homebrew. I've tried looking at some of the web-sites but there
> are a LOT of them, most not well indexed. So I'm looking for a clear
pointer
> of set of specs and clear instructions by e-mail or reply here. I'm just
asking
> that you don't just say " go to xx0xxx's site, he has tons." I know you
can buy
>
> them from MFJ. I'd like to try building my own (with help). Please
accept my
> thx. in advance.
>
> 73 de KG4JBM
>
> Reticulum
>
> Remove "your.hat" when replying via e-mail

1831. Re: QRP Transceiver Recommendation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-05 00:42:18 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u8853nm00cvg6b@corp.supernews.com>
Source record: 45873

This is kind of a bad time to ask that question. There are lots of choices, probably none of them good.

W4OP mentioned the K1 - this is a killer rig. Probably way more than you are looking for. $270 stripped, close to $500 fully decked out. Other than the 4 band option, however, there is no downside to ordering the options later. You need to build the basic rig and align it before adding any of the options, so you don't pay a price for not ordering the option right off. I tell you what, tho, the KAT-1 is really nice! But even with no options, this is a VERY nice radio.

The K2 is bigger, nicer, and more expensive.

N7XY mentioned the RH40. I have the NorCal version of the 20, which is basically the same radio without the nice case. There are few rigs at any price whose receiver can outperform this, and I assume the 40 meter is similar. This rig does have pretty high receive current for a QRP rig in order to get that receiver performance, so if your interest is backpacking this might not be your first choice. In actual operation (as opposed to the lab) this thing is a LOT better than the middle of the Yaecomwood range. Well, I say as opposed to the lab, in the ARS Sojourner lab tests it looks about like the K2 or the Yaseu FT1000MP. Only problem is, Dave hasn't been shipping them for a while and it's anybody's guess when he will start. I've loaned mine to 2 different folks. One bought a K1 and immediately noticed the receiver wasn't as good, the other bought an Icom and saw the same thing. But if you gotta have it, I'd plan for a year or so wait.

The only other one I would suggest is the SW-40+. This is the opposite end of the spectrum from the K1, this is your basic QRP single bander. Very low current draw, simple, cheap, but a credible performer. About $100 with case.

Most of the others that you can actually get are either novelty radios or older designs. Kanga has some bits and pieces that you can assemble into a reasonable rig, but it tends to get a little pricey. Ditto for the DL-QRP stuff. OHR still has some kits but an awful lot of folks seem to have to send these back to the factory to get them to work. You don't find that with the others.

You might try posting on QRP-L and/or QRP-F and see if anyone has a RH40 that they haven't built yet. Not real likely but occasionally something like that happens.

..

"Phil Green" <philip.r.green@btinternet.com> wrote in message news:a5tuki$4kk$1@paris.btinternet.com...

> Hi,
> I'm interested in building a 40M QRP transceiver kit. I'm looking for a
> reasonably priced unit, not the cheapest. Can anyone recommend one?
>
> Thanks
> Phil.
>
>
>
>
>

1832. FS: Coax relays and switches

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-05 00:49:17 UTC
From: msix@plato.nmia.com
Message-ID: <hCUg8.315090$n73.10603714@atlpnn01.usenetserver.com>
Source record: 45874

Small coax relays...

These are Danbury-Knudsen or FXR, silver-plated, flat to 600MHz+,
100W+, BNC coax jacks. See old Allied/Newark catalogs.

FXR, NOS, SPDT, 115VAC coil, 2 x 1.5 x 1 inches, shiny, $22

D-K, used, SPDT, 18-24VDC coil, 2 x 1.5 x 1 inches, shiny, $22

D-K, used, SPDT, 12VDC coil, 2 x 1.5 x 1 inches, tarnished, $22

D-K, used, SP6T, 12VDC coils, 3 x 3 x 2 inches, tarnished, $32

Motorola, NOS, SPDT, 6VDC coil, 3 x 2.5 x 1.5,
Ant and Rx BNC, Tx solder terminal, $12

Coax switches...

Heathkit Model HD-U234, SP4T, PL-259, removeable wall-mount bracket,
1/4 inch shaft, knob, 3 x 3 x 2 inches, $23

All pp 48
73 John W7ZFB
n

1833. Re: Electrolytic Capacitor Polarity Identification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-05 01:26:13 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <U8Vg8.38346$yL2.3230711@bin6.nnrp.aus1.giganews.com>
Source record: 45875

If the capacitor is in a metal can, that would be negative.

Perhaps if you describe the units we can figure out the style and thus advise you.

1834. Re: QRP Transceiver Recommendation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-05 03:05:30 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <NuWg8.1420$K%4.332557@news1.iquest.net>
Source record: 45876

Don't forget about the Norcal 40A from Wilderness Radio. It's an awesome tried and true tested 40m xcvr. I bought mine in 1998 and earned WAS QRP in less than a year with it and an attic dipole. I think with the keyer and everything it's about $180.00 and it is one supurb little rig.

--

==========
KB9BVN/QRP - New Whiteland IN - EM69WN
QRP-ARCI #10223 QRP-L #1540 FIST #5695
FISTS CC #764 - Proud Member ARRL
HEATH HW-9 @ 2W or NORCAL 40A @ 1.3W
INTO INFAMOUS AF4PS ATTIC DIPOLE
SOC #400 AND FLYING PIGS QRP #-57
==========

"Phil Green" <philip.r.green@btinternet.com> wrote in message news:a5tuki$4kk$1@paris.btinternet.com...
> Hi,
> I'm interested in building a 40M QRP transceiver kit. I'm looking for a
> reasonably priced unit, not the cheapest. Can anyone recommend one?
>
> Thanks
> Phil.
>
>
>
>
>

1835. Re: Electrolytic Capacitor Polarity Identification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-05 06:46:59 UTC
From: "Jim Hill, w6ivw" <XXslimjimis@cox.net>
Message-ID: <smp88uku95pe02dgdmqakrubrvmu7ior2c@4ax.com>
Source record: 45877

On Tue, 05 Mar 2002 01:26:13 GMT, "Bob" <balbert@cnmnetwork.com>
wrote:

>If the capacitor is in a metal can, that would be negative.
>
>Perhaps if you describe the units we can figure out the style and thus
>advise you.
>

Thanks for the replies. I used my old Heath IT-11 Capacitor checker to see if there was more leakage in one direction. 10 uF 16 V was too small to see leakage on the eye tube (works fine at higher voltages), so connected my Fluke 77 DMM across the leads and disconnected one of the IT-11 leads. There was a noticeable voltage drop difference between the two polarities as the capacitor discharged. Here's what I determined:

End with indent is positive. The "Arrows" pointed to the negative end. Upon closer inspection, I noticed the capacitor consisted of a small metal can with a blue vinyl cover. The wire was connected to the can at the negative end. The positive end had a black dielectric washer - easily could have been rubber.

So, everyone's suggestion gave the correct polarity.
Jim

1836. Re: Electrolytic Capacitor Polarity Identification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-05 06:48:53 UTC
From: "Jim Hill, w6ivw" <XXslimjimis@cox.net>
Message-ID: <giq88uoh43f0ja374t84n7uc186m94ih79@4ax.com>
Source record: 45878

On Tue, 05 Mar 2002 01:26:13 GMT, "Bob" <balbert@cnmnetwork.com>
wrote:

>If the capacitor is in a metal can, that would be negative.
>
>Perhaps if you describe the units we can figure out the style and thus
>advise you.
>

Thanks for the replies. I used my old Heath IT-11 Capacitor checker to see if there was more leakage in one direction. 10 uF 16 V was too small to see leakage on the eye tube (works fine at higher voltages), so connected my Fluke 77 DMM across the leads and disconnected one of the IT-11 leads. There was a noticeable voltage drop difference between the two polarities as the capacitor discharged. Here's what I determined:

End with indent is positive. The "Arrows" pointed to the negative end. Upon closer inspection, I noticed the capacitor consisted of a small metal can with a blue vinyl cover. The wire was connected to the can at the negative end. The positive end had a black dielectric washer - easily could have been rubber.

So, everyone's suggestion gave the correct polarity.
Jim

1837. Re: What is cases as Homebrew?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-05 14:51:39 UTC
From: Kevin Ames <mtnclimb@in-tch.com>
Message-ID: <a62m1e$i5u$1@news.tamerica.net>
Source record: 45879

I'm an engineer and am still suprised everytime something works. Guess my
degree is a B.S. in Homebrew, not EE. Actually "homebrew" (the fermented
kind) got me through college, maybe that's why I'm so suprised whenever
something I design works, HI HI.
73's
Kevin Ames
AA7YQ

"tongaloa" <tongaloa@alltel.net> wrote in message
news:a60mulsmg1@iac5.navix.net...
> If you understand the engineering to the point that you are not surprised
> when it works, then it's homebrew :-)
>
> -t
>

1838. Re: Completely OT : Homebrew a Jet-Pak ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-05 15:08:04 UTC
From: Kevin Ames <mtnclimb@in-tch.com>
Message-ID: <a62n0cibv1@news.tamerica.net>
Source record: 45880

Here is a site with a bit of rocket/jet pack history for ya:
http://users.chariot.net.au/~theburfs/URPERS.html

73's
AA7YQ
Kevin Ames

"Reticulum" <Cathexis@yourhaterols.com> wrote in message
news:3c82f80c.530810470@news.erols.com...
> Howdy,
>
> I know, I know, completely wacky. But I've slavered for one of
these
> since the sixties. Saw one demonstrated once live many, many moons ago.
> Has anyone ever built one? Possible ? If anyone has any leads on these
> "blasts from the past" I'd sure appreciate a pointer.
>
> Thx. es 73 de KG4JBM / Andrew
> Reticulum
>
> Remove "your.hat" when replying via e-mail

1839. IF Filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-05 15:20:41 UTC
From: Kevin Ames <mtnclimb@in-tch.com>
Message-ID: <a62no1$im4$1@news.tamerica.net>
Source record: 45881

Howdy,

Has anyone here ever built a simple superhet using a single crystal in series as an IF CW filter. I have always wondered how well this would work and vaguely recall a schematic in which this technique was used.

Also has anyone ever tried using off-the-shelf (broadcast radio) IF filters and a double conversion scheme to get a variable bandwidth IF filter? This seems like a cheap, all mode solution.

Please let me know of the results you have had both good and bad with both schemes. I am working on a little receiver design and am considering both techniques, but would like to get some input from other folks.

73's
Kevin Ames
AA7YQ

1840. Re: Dan's small parts & kits ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-05 15:37:09 UTC
From: Kevin Ames <mtnclimb@in-tch.com>
Message-ID: <a62on0irr1@news.tamerica.net>
Source record: 45882

Fantastic service,
I got exactly what I ordered with only a few day delay, despite the fact
that snail mail was used. He is located in Missoula Montana, you can always
trust the folks in Big Sky Country.

-Kevin Ames
AA7YQ

"maxpowa" <maxpowa@iwontellsorry.com> wrote in message
news:emrf8.209673$rt4.21295@afrodite.telenet-ops.be...
> Hey,
>
> Anybody ever bought anything from this guy ? (Dan's small parts & kits)
>
> Was it good or bad ? fast delivery ?
>
> How did you pay ? Did it work out OK ?
>
> Thanks in advance,
> Steven
>
>
>
>

1841. Re: IF Filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-05 17:22:35 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C84FEDB.6A737029@ieee.org>
Source record: 45883

Hi, Kevin,

I did a little single conversion receiver using a 455kHz resonator from Toko purchased at Digikey. It was their "AM 455kHz" model. It worked ok, but my LO drifted badly.

Clyde
KA1CRV

Kevin Ames wrote:

> Howdy,
>
> Has anyone here ever built a simple superhet using a single crystal in
> series as an IF CW filter. I have always wondered how well this would work
> and vaguely recall a schematic in which this technique was used.
>
> Also has anyone ever tried using off-the-shelf (broadcast radio) IF filters
> and a double conversion scheme to get a variable bandwidth IF filter? This
> seems like a cheap, all mode solution.
>
> Please let me know of the results you have had both good and bad with both
> schemes. I am working on a little receiver design and am considering both
> techniques, but would like to get some input from other folks.
>
> 73's
> Kevin Ames
> AA7YQ

1842. Re: IF Filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-05 19:44:10 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0203051144.50154f8b@posting.google.com>
Source record: 45884

"Kevin Ames" <mtnclimb@in-tch.com> wrote in message
news:<a62no1$im4$1@news.tamerica.net>...
> Howdy,
>
> Has anyone here ever built a simple superhet using a single crystal in
> series as an IF CW filter. I have always wondered how well this would work
> and vaguely recall a schematic in which this technique was used.
>
> Also has anyone ever tried using off-the-shelf (broadcast radio) IF filters
> and a double conversion scheme to get a variable bandwidth IF filter? This
> seems like a cheap, all mode solution.
>
> Please let me know of the results you have had both good and bad with both
> schemes. I am working on a little receiver design and am considering both
> techniques, but would like to get some input from other folks.
>
> 73's
> Kevin Ames
> AA7YQ

A lot of receivers, both homemade and commercial, used a single-crystal filter. Obviously before mechanical filters (and later crystal lattice filters) came along, but well past that time too. I gather that the single-crystal filter is what brought about single-signal selectivity in the thirties; I've seen references to a certain article (that I've never seen) that seems to be the source, at least in ham radio circles.

These were "phasing type crystal filters". The signal was split into two paths 180 degrees apart, usually by a center-tapped IF transformer. One side goes through the crystal, and the other goes through a small variable capacitor. The capacitor there is to phase out the capacitance of the crystal holder, and the result is a very narrow passband (though of course not very good skirt selectivity). By varying the capacitor, you can also a rejection notch on one side of the curve.

This was only good for CW, since the bandwidth was so narrow. Since people wanted to listen to other things, usually a variable load resistance was added. So by changing that load resistor, the bandwidth could be widened up. The better receivers would have the phasing and bandwidth controls on the front panel, and the latter would often short out the crystal for widest bandwidth, relying on the IF transformers for selectivity.

It was probably best when CW was fairly prodominent, and the bands were less crowded. Once SSB came along, there was a big shift to

mechanical filters and multiple-crystal filters, because they could provide a wider bandwidth with less trade-off, and better skirt selectivity. If you were using a filter to generate SSB, you'd have such a filter already in a transceiver, or want a matching IF in the receiver and transmitter if separates.

Usually, they've been at 455KHz, though one surplus receiver, was it the BC-348?, had such a filter at 915KHz (and from comments it didn't seem to work that well, though it might have been the specific crystal). Once in a while, someone showed a receiver with such a crystal filter somewhere just below 2MHz.

Occasionally, people would describe something using such a filter, but they would cascade a number of identical stages, for better skirt selectivity. Of course, you'd need the crystals to be very close in frequency, and then it might make sense to go to a ladder filter at this point.

More simpler, you could just put a crystal in the signal path. The 1961 ARRL Handbook shows a tuneable converter for use with a broadcast receiver, and it just puts a 1.7Mhz crystal between the output of the converter and the lead to the receiver. Not an optimum situation, but it will give you narrow selectivity with virtually no cost.

Perhaps what you've seen is in "W1FB's Design Notebook". Before going into crystal ladder filters, he suggests a couple of simple and cheap filters. One is just a 10MHz crystal in the signal path. He notes that a low IF will not have enough bandwidth for voice. Again, you'd probably get some limited control over bandwidth by adjusting the load resistor.

I don't think the scheme of mixers and multiple filters is a good choice if you are starting with not so great filters. You end up with the problems of extra conversions, and without good skirt selectivity.

I assume the ceramic filters in CB sets are narrower than what you'd find in a broadcast radio. Pick up some scrap CB sets at a hamfest, and cascade two or more filters. This would give you better selectivity, more suitable for voice (though not perfect for SSB) and better skirts. Get a ceramic resonator that matches the frequency of the ceramic filters (I'm not sure if the CB sets all use 455KHz, but I've seen broadcast receivers using either 455KHz or 450KHz). And use that for narrower selectivity. Ceramic resonators may be easier to get than crystals at that frequency; I just opened up a remote control the other day, and there was a 455KHz resonator.

Or get a bunch of ceramic resonators and try making a ladder filter out of them.

Michael VE2BVW

1843. Kenwood MC-60A Mic Gain???????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-05 21:09:14 UTC
From: Carl Domanico <carl.domanico@verizon.net>
Message-ID: <3C855E48.ED986B0D@verizon.net>
Source record: 45885

> Hi...Wonder if I could get some input on improving the amplifier gain
> on my MC-60A Kenwood Desk Microphone??? I'm using a Kenwood TM-741A
> Triband FM Mobile Radio with the Kenwood MC-60A Kenwood Desk
> Microphone. This Model has the fixed level preamplifer built into the
> base..The Model I have has a switch on the bottom to either switch in
> or out the preamplifer...There are NO level adjustments !! The Circuit
> is powered by either Two AA Batteries in the Base..Or if you have a
> Kenwood Radio, such as I do, ..You can obtain the power through the
> radio mic jack..

What I would like to do is be able to increase the gain to somewhat
Higher levels....?? So Can I squeeze that added gain from the transistor
and IC in the circuit...or would I have to change the combo????

Any Input would be greatly appreciated here...

Thanks
Carl
N2MFW

1844. FA - Harris RF3281 ATU

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-05 21:20:30 UTC
From: Martin John Hallsworth <Martin@NOSPAMg1gyc.demon.co.uk>
Message-ID: <1015363218.24508.0.nnrp-07.9e98acde@news.demon.co.uk>
Source record: 45886
Cross-posted to: alt.radio.amateur,misc.industry.electronics.marketplace,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

Have a look at this auction.

http://page.auctions.shopping.yahoo.com/uk/auction/62026904

1845. RE: IF Filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-05 21:44:51 UTC
From: EA6NP <Igor@novalid.com>
Message-ID: <1015364660.189884@rnewsr2.es.tisadm.net>
Source record: 45887

Kevin:
I tried some designs with 8 MHz IF Filters. I have a schematic of a litlle 14 MHz receiver in my web page www.qsl.net/ea6np (Go to "Homebrewing", receiver called "B14")

The IF bandwith with 6 xtal is 800 Hz, and with 4 xtal is about 1,1 KHz. This second options sounds quite well on CW.

73, Juan EA6NP

1846. Re: Completely OT : Homebrew a Jet-Pak ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-05 22:15:24 UTC
From: "F. Feeney" <fkf1@cornell.edu>
Message-ID: <a63g1s$8ej$1@news01.cit.cornell.edu>
Source record: 45888

In article <3c8406c8.533544@news.erols.com> Reticulum,
Cathexis@yourhaterols.com writes:
> Regardless, I really liked the history you through in there. I had
no idea
>"college kids" ever flew these things.

It was a surprise to me too, but that's what the fellow claimed. It's
been 20 years since I talked to him, and it had been years since he had
worked on them, but he seemed pretty sharp on all the details.

I thought it was all military and test
>pilots. I'm not a pilot, but as I recall , and based on what you said
Jet-Paks
>could do, you really shouldn't need a pilot's license.

Hmmm, well if it weighs less than 254 lbs, goes slower than 61 mph, and
carries less than 5 gallons of fuel it could qualify as an ultralight. I
think the 5 gallons of fuel might be the hitch there.

Maybe just a License
>to Kill (Hi, Hi.)

Or crash.

Did you and your friend ever talk about building one ?

No, he was the landlord of a friend of mine in college, and he *had*
built them in the past so he wasn't interested in doing it again. Just
fondly looking back at some cool projects he'd participated in. I'd love
to have one, but feel a bit naked flying without a cage around me. I've
done it parachuting and it's sort of unnerving to just be hanging out
there. I prefer a plane or ultralight I can sit inside of.

That website posted by Kevin Ames is pretty cool too, (thanks kevin),
though it doesn't quite dovetail with my friend's account. And your
dad's history. I imagine it would be very interesting if we ever all got
a really good account of all the things that happened during that time.

Kevin, WB2EMS

>
> Andrew
> Reticulum
>

1847. top coupled bandpassfilter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-05 22:19:17 UTC
From: la8ak.xnd@online.no
Message-ID: <3c85437a.353270929@news.online.no>
Source record: 45889

Have some problems constructing an xtal filter for 60kHz, so in the meantime I will try an LC-filter using two 4.7mH coils (with 1500pF) and undercritical coupling

The filter is connected between drain of 40673 and input of NE612 using a cpacitive divider to transform to 1500 ohm. Can't find any gos for 3N200 for less than 100MHz (0.15mmho), so I suppose it is very high.
The coils have an unloade Q of 650, so the unloaded bandwidth may be small enough, but I wish to improve rejection.
0.2-1kHz bandwidth is suitable, but I cannot remember how to calculate the top capacity

any suggestion, pse?

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

1848. Re: HF transceiver miniature

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-05 22:36:40 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u8ai3uauooml80@corp.supernews.com>
Source record: 45890

Eamon

Have you looked into the TI TRF4400/4900. This is a transmitter on a chip with DDS, PLL cleanup and an amp (well 7 dbm so not much of an amp) for a tiny fraction of the price of the AD parts, and a bunch easier to get, at least over here.

The 4400 is a 440 MHz part and the 4900 is 900. A little division and it seems like just the thing for a VFO, altho Steve Weber did get the 4400 to work down in the 100 MHz region so for 144 MHz maybe use it direct. TI also has 1 and 2 GHz DDS chips that are real cheap and easy to get, but the 4x00 have the PLL onboard for the same price (around 3 punts, I don't know what that is in Euros).

..

"Eamon Skelton" <Xnospam@oceanfree.net> wrote in message news:ftd06a.45t.ln@my.linux.box...
> In article <7tBg8.12666$gK2.922596@bgtnsc04-news.ops.worldnet.att.net>, Pete Gianakopoulos wrote:
> > I would probably use the 9851, if low current drain is desired. The 9852 is
> > cleaner, but much higher current. I have used the 9851 for a couple of
> > years, and it isn't too bad, but still, it is not as clean as a PLL design.
> > Many in-band artifacts.
> >
> > Pete KE9OA
>
> Thanks for the info Pete. I'm planning to build a new rig for
> 2M. I was thinking of using a PLL with the VCO output mixed with
> a crystal oscillator and locked to VFO running at 4 to 6MHz to
> cover 144 to 146 MHz. A DDS might be a good way of generating the
> 4 to 6 MHz signal.
>
> 73, Ed. EI9GQ.
>
> --
> Remove 'X' to reply.
> http://homepage.eircom.net/~ei9gq
> Linux 2.4.17

1849. Re: top coupled bandpassfilter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 00:44:43 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <8hpa8uo0qr8ajto4c6ft7u2ji33aprp8qf@4ax.com>
Source record: 45891

Jan-Martin:

The easiest way is to use the demo version software FaiSyn available at;

http://members.aol.com/faisyn/faisyn.htm

It will automatically calculate the coupling caps for you and design the filter as well. It does top coupled resonators quite well.

If you want the details behind how you might calculate these by hand, I can go through that with you as well. It basically involves determining the normalized coupling coefficients k12, k23, etc. and transforming them into de-normalized coefficients K12, K23, etc. The k12, etc. are found from tables, or from the underlying equations (Tchebychev, Butterworth, etc.) But, all this is embedded in FaiSyn.

Jack Smith K8ZOA

On Tue, 05 Mar 2002 22:19:17 GMT, la8ak.xnd@online.no (J M Noeding) wrote:

>Have some problems constructing an xtal filter for 60kHz, so in the
>meantime I will try an LC-filter using two 4.7mH coils (with 1500pF)
>and undercritical coupling
>
>The filter is connected between drain of 40673 and input of NE612
>using a cpacitive divider to transform to 1500 ohm. Can't find any gos
>for 3N200 for less than 100MHz (0.15mmho), so I suppose it is very
>high.
>The coils have an unloade Q of 650, so the unloaded bandwidth may be
>small enough, but I wish to improve rejection.
>0.2-1kHz bandwidth is suitable, but I cannot remember how to calculate
>the top capacity
>
>any suggestion, pse?
>
>73
>Jan-Martin
>LA8AK

1850. Re: UK Component Suppliers List

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 00:56:35 UTC
From: Steve Terry <g4wwk@oinospamtesco.net>
Message-ID: <TPdh8.107699$Ah1.14481487@news2-win.server.ntlworld.com>
Source record: 45892
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"geoffrey brown" <geoff@spontaflex.freeserve.co.uk> wrote in message
news:a5on5q$ur5$1@news6.svr.pol.co.uk...
> I'm posting a list of UK component suppliers
>
> on my website http://www.spontaflex.freeserve.co.uk/
>
> to assist anyone contemplating constructing any
>
> of Sir douglas Halls circuits.
>
> this is what I have so far
<snip>
>
and
Mainline Electronics
Unit A
Cuters Close, Narborough
Leicester
LE9 5FY
Leicestershire
Tel: 0116 286 5303
Fax: 0116 286 7797

1851. Re: top coupled bandpassfilter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 02:00:10 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <a63t79$3qe$1@nntp9.atl.mindspring.net>
Source record: 45893

J M:

See for instance:

DeVerl S. Humpreys, "The Analysis Design and Synthesis of Electrical Filters", Prentice-Hall, Englewood Cliffs NJ, 1970. ISBN 0-13-032904-3. LCCN 79-108809. LCCall TK7872.F5H84. Especially Chapter 7.

--Peter K1PO

"J M Noeding" <la8ak.xnd@online.no> wrote in message news:3c85437a.353270929@news.online.no...
> Have some problems constructing an xtal filter for 60kHz, so in the
> meantime I will try an LC-filter using two 4.7mH coils (with 1500pF)
> and undercritical coupling
>
> The filter is connected between drain of 40673 and input of NE612
> using a cpacitive divider to transform to 1500 ohm. Can't find any gos
> for 3N200 for less than 100MHz (0.15mmho), so I suppose it is very
> high.
> The coils have an unloade Q of 650, so the unloaded bandwidth may be
> small enough, but I wish to improve rejection.
> 0.2-1kHz bandwidth is suitable, but I cannot remember how to calculate
> the top capacity
>
> any suggestion, pse?
>
> 73
> Jan-Martin
> LA8AK
> --
> remove ,xnd to reply

1852. AD607s as HF Receiver front end

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 03:54:53 UTC
From: Kevin Ames <mtnclimb@in-tch.com>
Message-ID: <a6440b$43p$1@news.tamerica.net>
Source record: 45894

Howdy,

Has anyone tried to use the AD607 as an HF receiver? I used one back in 1999 with an AD7008JP50 as a simple 20m superhet for my senior design in college. If anyone has had good results I would love to compare notes. I got it to work, but the results were less then optimum. I have not tried to build a superhet since and am thinking about attempting this again. This time I won't be under the time constraints and doing most of the work at 3am, so I may have better results. Anyhow, any info would be appreciated.

73s
Kevin - AA7YQ

1853. Re: REQ: Kenwood KPG-66d, KPG-44

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 04:51:56 UTC
From: nobody@home.com
Message-ID: <r27b8uci1ambkirc5hio2gcmkhnosgeb1c@4ax.com>
Source record: 45895

Could you point to a location of the wiring?
>
>> Looking for a source of the wiring for the KPG-46 cable and for the
>> programming software KPG-66d
>>
>> Bob
>
>its very simple,
>use good old MAX232 and connect to TRX mic input.
>I use this for 3 years.
>

1854. WTT USED GOOD 8877 TUBE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 07:34:04 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3C85C66C.9B4BF2E0@charter.net>
Source record: 45747

Looking for a GOOD used 8877 tube. If you have a spare let me know.
thanks chris NI4L

--

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Click here for more info... http://www.angelfire.com/nb/ni4l/

1855. Re: IF Filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 08:29:41 UTC
From: n2cqr@clix.pt
Message-ID: <3c85d2ea.3963783@news.clix.pt>
Source record: 45896

On Tue, 5 Mar 2002 08:20:41 -0700, "Kevin Ames" <mtnclimb@in-tch.com>
wrote:

>Howdy,
>
>Has anyone here ever built a simple superhet using a single crystal in
>series as an IF CW filter. I have always wondered how well this would work
>and vaguely recall a schematic in which this technique was used.
>
>Also has anyone ever tried using off-the-shelf (broadcast radio) IF filters
>and a double conversion scheme to get a variable bandwidth IF filter? This
>seems like a cheap, all mode solution.
>
>Please let me know of the results you have had both good and bad with both
>schemes. I am working on a little receiver design and am considering both
>techniques, but would like to get some input from other folks.
>
>73's
>Kevin Ames
>AA7YQ

Kevin: Doug DeMaw had a circuit in one of his books that used one rock
as the filter. He also used a crystal to replace the emitter bypass
cap in the IF amp. I thought that was pretty cool.

73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 15.7 W
http://planeta.clix.pt/n2cqr

1856. Re: MM5314 Clock Chip data sheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 09:42:07 UTC
From: "Alan 'A.J.' Franzman" <a.j.franzman@null.com.invalid>
Message-ID: <Pvlh8.3315$tL.1683@nwrddc02.gnilink.net>
Source record: 45748

"Clyde R. Shappee" <cshappee@ieee.org> wrote in message
news:3C83FD67.19019CF7@ieee.org...
> Well, I have a 5314 that drives 7 segment, and have considered
making a CPLD or PAL that goes
> backwards from 7 segment to BCD.... I likely wont use the chip in
the new clock. Still desire
> the data sheet.
>
> But in 2 hours yesterday I did the entire BCD clock design for a
CPLD..... It has features that
> I really like that I implemented years ago in a microprocessor
system in that:
>
>
> you my change the hours without affecting the seconds,
> you can advance the time or make it go backwards easily during
setting, hours
> independently of minutes.
>
> As for the nixie chat group, Hans, is this a yahoo chat or a usenet
News group? If it is a
> usenet group, what is the proper name for the group?
>
> Hans, thanks for the links....
>
> Clyde
> KA1CRV
>
> Tom Bruhns wrote:
>
> > "Clyde R. Shappee" <cshappee@ieee.org> wrote in message
news:<3C818E09.422DAEBE@ieee.org>...
> > ...
> > > I am working on a (sorry guys, please don't gag) a Nixie clock.
After I posted
> > > the data sheet request, I realized this wasn't a BCD clock. I
still would like
> > > the data sheet for reference.
> >
> > Well, the data sheet covers four parts, some of which do have BCD
> > output. There are also some other MM53xx clock chips that have
BCD
> > outputs. Guess you'll have to latch those and drive 7441's or
equiv.

> > for your Nixies. -- Will you be wanting one of the BCD-output
chips?
> >
> > Cheers,
> > Tom

Clyde,

There is already a chip (if you can find it) to convert 7-segment to BCD, the 74915. You'll still need to demultiplex the 7-segment in most cases.

I built a fantasy clock using an MM53xx (15?) chip and standard CMOS logic chips several years ago, a wall clock loosely based on the "Alien Clock" which was an LED binary clock that enjoyed brief popularity and even appeared in some episodes of Star Trek: Deep Space Nine. Interestingly, the Alien Clock had a "random" feature which gave a constantly changing display that does NOT tell the time, but in one episode a character "reads" the time from this display!

Here's the link to the NEONIXIE-L Yahoo group:
http://groups.yahoo.com/group/NEONIXIE-L/join

Hope to see you there soon!

--

Alan "A.J." Franzman

Email: a.j.franzman at verizon dot net

1857. Re: Completely OT : Homebrew a Jet-Pak ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 11:49:37 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <lnnh8.121075$7a1.10316714@bin5.nnrp.aus1.giganews.com>
Source record: 45749

By the way, the location of the "Bond" movie where the Jet Pack is used was Anet, a hunting lodge for Catherine de Medici just a few miles outside Chartres. (which is about 60 miles from Paris).

"Reticulum" <Cathexis@yourhaterols.com> wrote in message news:3c8406c8.533544@news.erols.com...
> Nice reply, Kevin.
>
> It was a long time ago, 35+ years easy. As I recall, my old man,
> who worked at Langley outside Wash.,D.C., took my brother and I
> with him over to the Naval Surface Warfare bldg over in suburban
> MD. and it was over there that we "happened" to see a Demo in a
> parking lot with really not much of anyone around. I have no idea
> why we were there in the first place.
>
> My pop claims not to remember it. However he did admit 30 years
> after he left the Agency that he did go through full training down at
> Camp Perry. Apparently, he also may have put those skills to work
> when I was still very young. Frankly, things are blurry and he doesn't
> always confirm what I remember growing up, or sometimes comes up
> with something totally different. If you aren't familiar with those place
> names the internet may provide more.
>
> Regardless, I really liked the history you through in there. I had no
idea
> "college kids" ever flew these things. I thought it was all military and
test
> pilots. I'm not a pilot, but as I recall , and based on what you said
Jet-Paks
> could do, you really shouldn't need a pilot's license. Maybe just a
License
> to Kill (Hi, Hi.) Did you and your friend ever talk about building one ?
>
> Andrew
> Reticulum
>
> Remove "your.hat" when replying via e-mail

1858. Re: HF transceiver miniature

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 12:05:37 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c8604d7$0$2343@echo-01.iinet.net.au>
Source record: 45750

This appears to be aimed at the market for short range remote control links.
They quote phase noise at 100dBc/ root Hz at 50 KHz which doesnt appear
particularly good.
Also, as the DDS is the reference for the PLL, spurs will not be cleaned up
much by the loop and will be amplified by the frequency multiplication.
I cant see any figures on spectral purity but I guess it is not critical for
the application.
Are there any data from the people quoted on this?

Richard

"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:u8ai3uauooml80@corp.supernews.com...
> Eamon
>
> Have you looked into the TI TRF4400/4900. This is a transmitter on a chip
> with DDS, PLL cleanup and an amp (well 7 dbm so not much of an amp) for a
> tiny fraction of the price of the AD parts, and a bunch easier to get, at
> least over here.
>
> The 4400 is a 440 MHz part and the 4900 is 900. A little division and it
> seems like just the thing for a VFO, altho Steve Weber did get the 4400 to
> work down in the 100 MHz region so for 144 MHz maybe use it direct. TI
also
> has 1 and 2 GHz DDS chips that are real cheap and easy to get, but the
4x00
> have the PLL onboard for the same price (around 3 punts, I don't know what
> that is in Euros).
>
> ..
>
> "Eamon Skelton" <Xnospam@oceanfree.net> wrote in message
> news:ftd06a.45t.ln@my.linux.box...
> > In article <7tBg8.12666$gK2.922596@bgtnsc04-news.ops.worldnet.att.net>,
> Pete Gianakopoulos wrote:
> > > I would probably use the 9851, if low current drain is desired. The
> 9852 is
> > > cleaner, but much higher current. I have used the 9851 for a couple
of
> > > years, and it isn't too bad, but still, it is not as clean as a PLL
> design.
> > > Many in-band artifacts.
> > >
> > > Pete KE9OA
> >

> > Thanks for the info Pete. I'm planning to build a new rig for
> > 2M. I was thinking of using a PLL with the VCO output mixed with
> > a crystal oscillator and locked to VFO running at 4 to 6MHz to
> > cover 144 to 146 MHz. A DDS might be a good way of generating the
> > 4 to 6 MHz signal.
> >
> > 73, Ed. EI9GQ.
> >
> > --
> > Remove 'X' to reply.
> > http://homepage.eircom.net/~ei9gq
> > Linux 2.4.17
>
>

1859. Re: HF transceiver miniature

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 12:08:44 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <cs056a.5mu.ln@my.linux.box>
Source record: 45752

In article <u8ai3uauooml80@corp.supernews.com>, xpyttl wrote:
> Eamon
>
> Have you looked into the TI TRF4400/4900.

I've never even heard of them! I'll look for the data-sheets today.

> The 4400 is a 440 MHz part and the 4900 is 900. A little division and it
> seems like just the thing for a VFO, altho Steve Weber did get the 4400 to
> work down in the 100 MHz region so for 144 MHz maybe use it direct. TI also
> has 1 and 2 GHz DDS chips that are real cheap and easy to get, but the 4x00
> have the PLL onboard for the same price (around 3 punts, I don't know what
> that is in Euros).

They sound like the perfect device for my new 2M rig. Can you
recommend a good supplier?

ï¿½3 is pretty reasonable by AD standards. 1 Euro = 0.787564 Punts.

Many Thanks,

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

1860. Re: Kenwood MC-60A Mic Gain???????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 13:03:20 UTC
From: Ken Ashcroft <ken@g3msw.demon.co.uk>
Message-ID: <qBrIBwBYOhh8EwU6@g3msw.demon.co.uk>
Source record: 45751

The TM-741 does not need any pre-amplification. Has someone messed with
the deviation? The mic input to Kenwoods has been standard for years.
In article <3C855E48.ED986B0D@verizon.net>, Carl Domanico
<carl.domanico@verizon.net> writes
> Hi...Wonder if I could get some input on improving the amplifier gain on
> my MC-60Aï¿½ Kenwood Desk Microphone??? I'm using a Kenwood
> TM-741A Triband FM Mobile Radio with the Kenwood MC-60A
> Kenwood Desk Microphone. This Model has the fixed level preamplifer
> built into the base..The Model I have has a switch on the bottom to eith
> er switch in or out the preamplifer...There are NO level adjustments !!
> The Circuit is powered by either Two AA Batteries in the Base..Or if
> you have a Kenwood Radio, such as I do, ..You can obtain the power
> through the radio mic jack..
>What I would like to do is be able to increase the gain to somewhat Higher
>levels....?? So Can I squeeze that added gain from the transistor and IC in
>the circuit...or would I have to change the combo????
>
>Any Input would be greatly appreciated here...
>
>Thanks
>Carl
>N2MFW
>ï¿½

--
Ken Ashcroft

1861. Battery assisted power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 16:51:53 UTC
From: post_to_usenet@hotmail.com
Message-ID: <b6b4e772.0203060851.662faea2@posting.google.com>
Source record: 45753

Hi,

I'm buying my first HF rig, and I will need a power supply for it. I was thinking of doing it myself. I know it will probably be more expensive than if I buy it, but I think the pleasure is in building it.

After thinking several options (20~30 A is more than I am used to work with), I think I'll try to do it with batteries, a small charger and a stabilizer.

Ideally I would use 3x6V to make 18V and then use a stabilizer to reduce it to 14.5, but big amperage 6V batteries are hard to find (here at least).

Then the other option is to use two 12V ordinary car batteries and go up to 24V, but the problem with this is the increassed dissipation when reducing to 14.5V (~200W @ 20A). A good thing about it is (IMHO) that, in mains failure conditions, you could parallel both batteries and run the rig at 11~12V for a longer time. Q: Do modern rigs turn off themselfs at some (un)reasonable point below/arround 12V?

The working conditions for the batteries would be simmilar to those in a car: Off most of the time; short discharge periods (TX) and charging while the rig is on RX.

What dou you think about it? I haven't decided yet, and would like to hear other people's opinions.

Thanks for answers

Toni

1862. Re: top coupled bandpassfilter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 17:05:13 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a65i8p$bhe3t$1@ID-124126.news.dfncis.de>
Source record: 45754

Try 15 pF

1863. Re: Battery assisted power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 17:49:32 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <PEsh8.12141$_q.260271234@news.inreach.com>
Source record: 45755

Toni:

Building an AC supply for your DC powered transceiver is only more expensive than buying one ready made if you insist on buying new parts and paying retail prices for them. If you look around at ham swaps you can often find the parts for a tiny fraction of their original cost...I know because I often sell them there. I have a number of homebrew supplies running now that were built from miscellaneous parts.

A battery offers some advantages, like the ability to keep running when commercial power fails, but they have a limited lifetime and have to be periodically replaced. Also, you should use "deep cycle" or "marine" batteries, not automotive types...car batteries don't like to be heavily discharged and recharged.

Also keep in mind that the term "12 volt" when applied to batteries is a name and not an electrical specification. The actual voltage can be much higher when fully charged.

If you really want to go with a battery for DC power, use a single marine/deep cycle battery with a smart charger that won't overcharge it. Don't complicate matters with multiple batteries with a wasteful regulator.

Roger K6XQ

1864. Re: IF Filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 19:13:58 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <a65ppl$pt1$1@helle.btinternet.com>
Source record: 45756

"Bill Meara" <n2cqr@clix.pt> wrote in message
news:3c85d2ea.3963783@news.clix.pt...

>
> Kevin: Doug DeMaw had a circuit in one of his books that used one rock
> as the filter. He also used a crystal to replace the emitter bypass
> cap in the IF amp. I thought that was pretty cool.

A similar arrangement was quite common when ceramic resonators first came
out. They used conventional IF tranformers, as well. The resonators gave
additional selectivity.

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.con
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

1865. Re: top coupled bandpassfilter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 20:17:13 UTC
From: k7itm@aol.com
Message-ID: <3200347.0203061217.3d2f6572@posting.google.com>
Source record: 45757

Jack Smith suggested a filter-specific program, which of course should work fine. Another way for up to perhaps three resonator systems would be to simply use SPICE. It's trivial to "adjust" the coupling capacitor and see the freq response changes. You can get various freeware versions of Spice, and of course it could be useful in providing insights into some of the other circuits you explore. If you're interested, and have trouble finding the freeware ones, post a query and I'm sure we can come up with some links.

Cheers,
Tom

la8ak.xnd@online.no (J M Noeding) wrote in message news:<3c85437a.353270929@news.online.no>...
> Have some problems constructing an xtal filter for 60kHz, so in the
> meantime I will try an LC-filter using two 4.7mH coils (with 1500pF)
> and undercritical coupling
>
> The filter is connected between drain of 40673 and input of NE612
> using a cpacitive divider to transform to 1500 ohm. Can't find any gos
> for 3N200 for less than 100MHz (0.15mmho), so I suppose it is very
> high.
> The coils have an unloade Q of 650, so the unloaded bandwidth may be
> small enough, but I wish to improve rejection.
> 0.2-1kHz bandwidth is suitable, but I cannot remember how to calculate
> the top capacity
>
> any suggestion, pse?
>
> 73
> Jan-Martin
> LA8AK

1866. Tektronix 496 Spectrum Analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 20:31:26 UTC
From: Fred Allen <fallen-idc@worldnet.att.net>
Message-ID: <y0vh8.18273$gK2.1369610@bgtnsc04-news.ops.worldnet.att.net>
Source record: 45758

I am in need of the Frequency Switch for a Tektronix 496 Spectrum Analyzer. I believe it is listed in the Service Manual as Switch, Rotary Optical, part number 263-0054-00. Tektronix does not have the part; any help would be appreciated. I would also consider a complete 496 unit that is good for parts only.

Please e-mail what you have along with a price to:

fallen-idc@worldnet.att.net

Thanks,
Fred

1867. looking for a socket for 4x150g tube

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 20:57:05 UTC
From: WebMonkey <kb0wlf@earthlink.net>
Message-ID: <bg0d8uo7cj6vcbbvsspch9k9g94gssu5ks@4ax.com>
Source record: 45759

anyone have one of the strange animals ?

i believe it's an sk-604 or 2350

4x150G tube... no pins per se... funky coaxial base kinda thing =]

wanting to homebrew an amplification device for my repeater.

maybe twins for both bands.. twins in tubes/cosmetics...
the uhf design looks like loads of fun...

thanks
A.C. Curtis
KBï¿½WLF - owner operator of the mighty 45 multicast repeater system
53.45 and 442.45, 77.0Hz enc/dec, hf/2m remote base
mailto:demoman@rollanet.org
http://www.rollanet.org/~demoman

1868. Re: top coupled bandpassfilter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 21:49:24 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <a662t5ctd1@slb7.atl.mindspring.net>
Source record: 45760

Tom et al:

Humpreys referenced further up the thread shows the different effects of
using:

a.) Capacitive Top Coupling
b.) Inductive Top Coupling.
c.) Mixed Top Coupling, some Caps some Inductance, which ones and why,
etc...
c.) Imaginary Resistance (Constant Reactance) Top Coupling.

Each type of coupling gives a slightly different result, especially in terms
of passband ripple and symmetry.

Depends upon what you are after in the detailed passband response.

I agree, on low order systems you'r probably wasting time with synthesis,
just throw it into a circuit
simulator/analyzer and bench tune it!

--Peter K1PO

"Tom Bruhns" <k7itm@aol.com> wrote in message
news:3200347.0203061217.3d2f6572@posting.google.com...
> Jack Smith suggested a filter-specific program, which of course should
> work fine. Another way for up to perhaps three resonator systems
> would be to simply use SPICE. It's trivial to "adjust" the coupling
> capacitor and see the freq response changes. You can get various
> freeware versions of Spice, and of course it could be useful in
> providing insights into some of the other circuits you explore. If
> you're interested, and have trouble finding the freeware ones, post a
> query and I'm sure we can come up with some links.
>
> Cheers,
> Tom
>
> la8ak.xnd@online.no (J M Noeding) wrote in message
news:<3c85437a.353270929@news.online.no>...
> > Have some problems constructing an xtal filter for 60kHz, so in the
> > meantime I will try an LC-filter using two 4.7mH coils (with 1500pF)
> > and undercritical coupling
> >
> > The filter is connected between drain of 40673 and input of NE612
> > using a cpacitive divider to transform to 1500 ohm. Can't find any gos
> > for 3N200 for less than 100MHz (0.15mmho), so I suppose it is very
> > high.

> > The coils have an unloade Q of 650, so the unloaded bandwidth may be
> > small enough, but I wish to improve rejection.
> > 0.2-1kHz bandwidth is suitable, but I cannot remember how to calculate
> > the top capacity
> >
> > any suggestion, pse?
> >
> > 73
> > Jan-Martin
> > LA8AK

1869. Re: Battery assisted power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 22:07:22 UTC
From: "G. Skiffington" <skiffing@nbnet.nb.ca>
Message-ID: <3C86C823.4BD5@nbnet.nb.ca>
Source record: 45761

Howdy Toni.....Your scheme for using an 18v battery bank, charger and stabilizer (regulator) is sound and has the good advantage of being a no-break power supply good for AC mains interruptions - a side benefit of using the 18v is obviously that you have much more time available at rated (regulated) voltage for your equipment (as you obviously know).

Not sure why you can't find 6 volt batteries, but I'd suggest the following sources.....Truck parts places.....Agricultural and Heavy equipment dealers (always carry a line of HD batteries....and, although not as common as they once were, usually have 6 volt units available or in stock). Fork lift / material handling dealers/service depots also use 6 volt units for their (warehouse usually) equipment - here you "might" be even able to find "pulls". Marine supply houses often stock or may have available 6 volt batteries as well (some marine setups use banks of 6 volt units for their batteries). Some lead-acid battery "group" numbers you might look for are as follows:
BCI groups 1, 2, 2E, 2L, 2N, 17HF, 19L, 3, 4, 5D, 7D, 3EH and 4EH.
also listed in an older BCI guide (Battery Council International) I have here is for Electric Vehicles groups GC2 and GC2H.

You might also check with your telephone company/service dept as they "might" have available 6 volt (or close) batteries though they may be physically large.

Best of luck.

Gord - VE1AJF

1870. Re: top coupled bandpassfilter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 22:39:31 UTC
From: la8ak.xnd@online.no
Message-ID: <3c8698ac.440630300@news.online.no>
Source record: 45762

On Wed, 6 Mar 2002 17:05:13 -0000, "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>Try 15 pF
>
>
>
>
tnx

now received some suggested values between 4.3 and 26pF, perhaps I'll
try passband-tuning next?

...and with my somewhat limited efforts reading old ARRL handbook I
thought 90pF would do, but it isn't too difficult to sort out when you
know it is possible for this type of filter. Had more troubles with
single-xtal filter, measured some evenings, but seems impossible
without sweep-equipment, so I'll visit to LA6LCA who has network
analyzer and spectrum analyzers which works between 9kHz-30GHz

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

1871. Re: top coupled bandpassfilter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 23:06:17 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <vk7d8uc8mi9bqt1rk7j2vaoatgcq340938@4ax.com>
Source record: 45763

On Wed, 6 Mar 2002 16:49:24 -0500, "Peter O. Brackett"
<ab4bc@ix.netcom.com> wrote:

>Tom et al:
>
>Humpreys referenced further up the thread shows the different effects of
>using:
>
>a.) Capacitive Top Coupling
>b.) Inductive Top Coupling.
>c.) Mixed Top Coupling, some Caps some Inductance, which ones and why,
>etc...
>c.) Imaginary Resistance (Constant Reactance) Top Coupling.
>
>Each type of coupling gives a slightly different result, especially in terms
>of passband ripple and symmetry.
>

I'm about 90% done building a tunable 450 KHz - 2 MHz 3-resonator
filter. Mechanicals almost all done, coils wound, just have to finish
the tuning knob connection to the caps.

In order to keep the passband even close to reasonable over the two
octave tuning range, I had to make the coupling caps variable and gang
them with the main tuning cap. (That part is done with a toothed
timing belt drive.)

I looked at inductive top coupling and mixed coupling, but found
impracticable values. My capactive top coupling values started out at
10pF (500 KHz) decreasing to 0.9 pF at 1800 KHz. These are a bit
tough to realize, so I tapped the coupling caps down halfway on the
inductors and wound up with 40 pF --> 3.6 pF.

During the design and simulation process, I looked at one capactive
and one inductive top coupling circuits, as it would make the passband
more symetrical. Unfortunately, the coupling inductor came out around
4 mH (which also would have to be variable). This is a rather
unreasonable value to expect to work without stray resonance over this
frequency range, so I went with straight top couple C.

It would have also been possible to do bottom coupled C, which would
have the same effect (lower coupling with increased frequency) as top
coupled L. But, this also results in impractical values as well.
(2,000 or 3,000 pF variable, as I recall.)

Anyway, I learned a great deal more than I wanted to about coupled resonators over the last few weeks.

Jack Smith K8ZOA

1872. Re: looking for a socket for 4x150g tube

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 23:58:00 UTC
From: Walter Treftz <penguino@atlantic.net>
Message-ID: <3C86AD08.CE7EA2BC@atlantic.net>
Source record: 45764

Send me more details -- I have a couple of 4X150 sockets but it seems
that
they change with every 4X150--- type. Can you send a digital photo to me

at my home addr of --- penguino@atlantic.net ---
73 Walt (N4GL)

WebMonkey wrote:

> anyone have one of the strange animals ?
>
> i believe it's an sk-604 or 2350
>
> 4x150G tube... no pins per se... funky coaxial base kinda thing =]
>
> wanting to homebrew an amplification device for my repeater.
>
> maybe twins for both bands.. twins in tubes/cosmetics...
> the uhf design looks like loads of fun...
>
> thanks
> A.C. Curtis
> KBï¿½WLF - owner operator of the mighty 45 multicast repeater system
> 53.45 and 442.45, 77.0Hz enc/dec, hf/2m remote base
> mailto:demoman@rollanet.org
> http://www.rollanet.org/~demoman

1873. Re: Battery assisted power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-06 23:58:57 UTC
From: Rich Griffiths <richg@one.net>
Message-ID: <3C86AD41.5E1E9136@one.net>
Source record: 45765

Toni:

I've been using a single 12-V, 90-Ah deep-cycle battery and a home-made 4-A power supply as a charger for almost 10 years now. There's no need to go with the multiple batteries and regulators. You won't find better DC than what the battery will provide.

90-Ah is a medium sized battery that will run a 20-A rig for a long time. I don't know about all the rigs out there, but the Icom IC-746 (20-A transmit, 2-A receive) and Heath SB-1400 (20-A transmit, 1-A receive) both will work down to about 10.7 V. I've operated an entire Field Day weekend (with the charger disconnected) without draining the battery below 11.5 V.

Keep it simple.

... Rich

Toni wrote:
>
> Hi,
>
> I'm buying my first HF rig, and I will need a power supply for it. I
> was thinking of doing it myself. I know it will probably be more
> expensive than if I buy it, but I think the pleasure is in building
> it.
>
> After thinking several options (20~30 A is more than I am used to work
> with), I think I'll try to do it with batteries, a small charger and a
> stabilizer.
>
> Ideally I would use 3x6V to make 18V and then use a stabilizer to
> reduce it to 14.5, but big amperage 6V batteries are hard to find
> (here at least).
>
> Then the other option is to use two 12V ordinary car batteries and go
> up to 24V, but the problem with this is the increassed dissipation
> when reducing to 14.5V (~200W @ 20A). A good thing about it is (IMHO)
> that, in mains failure conditions, you could parallel both batteries
> and run the rig at 11~12V for a longer time. Q: Do modern rigs turn
> off themselfs at some (un)reasonable point below/arround 12V?
>
> The working conditions for the batteries would be simmilar to those in
> a car: Off most of the time; short discharge periods (TX) and charging
> while the rig is on RX.
>

> What dou you think about it? I haven't decided yet, and would like to
> hear other people's opinions.
>
> Thanks for answers
>
> Toni

1874. Re: top coupled bandpassfilter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-07 00:11:01 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c86aedd$0$4850@echo-01.iinet.net.au>
Source record: 45766

I have simulated just such a circuit using Microcap 3 which was around as freeware a few years ago.
As Tom says you can just change thavalues and observe the AC response and impedance etc.

Richard

"Tom Bruhns" <k7itm@aol.com> wrote in message news:3200347.0203061217.3d2f6572@posting.google.com...
> Jack Smith suggested a filter-specific program, which of course should
> work fine. Another way for up to perhaps three resonator systems
> would be to simply use SPICE. It's trivial to "adjust" the coupling
> capacitor and see the freq response changes. You can get various
> freeware versions of Spice, and of course it could be useful in
> providing insights into some of the other circuits you explore. If
> you're interested, and have trouble finding the freeware ones, post a
> query and I'm sure we can come up with some links.
>
> Cheers,
> Tom
>
> la8ak.xnd@online.no (J M Noeding) wrote in message news:<3c85437a.353270929@news.online.no>...
> > Have some problems constructing an xtal filter for 60kHz, so in the
> > meantime I will try an LC-filter using two 4.7mH coils (with 1500pF)
> > and undercritical coupling
> >
> > The filter is connected between drain of 40673 and input of NE612
> > using a cpacitive divider to transform to 1500 ohm. Can't find any gos
> > for 3N200 for less than 100MHz (0.15mmho), so I suppose it is very
> > high.
> > The coils have an unloade Q of 650, so the unloaded bandwidth may be
> > small enough, but I wish to improve rejection.
> > 0.2-1kHz bandwidth is suitable, but I cannot remember how to calculate
> > the top capacity
> >
> > any suggestion, pse?
> >
> > 73
> > Jan-Martin
> > LA8AK

1875. Re: top coupled bandpassfilter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-07 01:20:18 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <gofd8us3qgo1ujroic5a265o7m32l16bon@4ax.com>
Source record: 45767

On Thu, 7 Mar 2002 08:11:01 +0800, "Richard Hosking"
<zaprichardh@iinet.net.au(remove the zap)> wrote:

>I have simulated just such a circuit using Microcap 3 which was around as
>freeware a few years ago.
>As Tom says you can just change thavalues and observe the AC response and
>impedance etc.
>

I've found RFSim99 (freeware) to be very good for resonator modeling.
It's available at:

http://rf.rfglobalnet.com/software_modeling/software/2/710.htm

It also includes a filter design module, but the filters are not
coupled resonators. The matching module may also be of some interest.

Jack Smith K8ZOA

1876. Re: QRP Transceiver Recommendation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-07 01:58:41 UTC
From: Leon <moos318@in-motion.net>
Message-ID: <3C86C951.E0F2C61A@in-motion.net>
Source record: 45768

You might look at the Tentec t-kit. Fairly inexpensive, the manual is laid out to
allow for the "test as you build" method, nice looking enclosure. Have a lot of fun
with mine. It is a tad heavy if you are into backpacking, though.

Phil Green wrote:

> Hi,
> I'm interested in building a 40M QRP transceiver kit. I'm looking for a
> reasonably priced unit, not the cheapest. Can anyone recommend one?
>
> Thanks
> Phil.

1877. WTB- Vernier Dial for HB receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-07 03:44:51 UTC
From: Byron Tatum <bjtatum@ev1.net>
Message-ID: <3c86e53b_2@newsa.ev1.net>
Source record: 45769

Hello- I am looking for nice vernier dial mechanisms for homebrew receiver construction, such as millen, Eddystone, etc. Prefer the large slide rule type or types with a scale that can be calibrated. Thanks, Byron, WA5THJ.

1878. switching RF using cmos ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-07 09:42:27 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c8734e1.2384377@news.freeserve.net>
Source record: 45770

Has anyone used cmos switches for low levels of RF (up to +17dBm)
does it work or not?
if so, what losses/problems were encountered?
thanks Mike W, G8NXD qthr.

1879. Re: QRP Transceiver Recommendation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-07 11:41:12 UTC
From: John Seney <wd1v@amsat.org>
Message-ID: <wd1v-CEAE37.06441807032002@netnews.attbi.com>
Source record: 45771

In article <3C86C951.E0F2C61A@in-motion.net>, Leon
<moos318@in-motion.net> wrote:

>
> > Hi,
> > I'm interested in building a 40M QRP transceiver kit. I'm looking for
> > a
> > reasonably priced unit, not the cheapest. Can anyone recommend one?
> >
> > Thanks
> > Phil.

Look at http://www.elecraft.com

K1 is fun
K2 is too cool
John Seney
http://www.qsl.net/wd1v

1880. DTR-2000

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-07 12:23:13 UTC
From: Sparks W4EAS <sparksw4eas@mindspring.com>
Message-ID: <3C875BB1.BC1@mindspring.com>
Source record: 45772

Any one have a Dentron DTR-200 that needs a home? Looking for one to fix-up/rebuild. Sparks W4EAS

1881. FS: Box of SIX(6) AeroVox Mica Caps, .0015mmf @1200wvdc

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-07 18:20:14 UTC
From: rlucch2098@aol.com
Message-ID: <20020307132014.05071.00000025@mb-mt.aol.com>
Source record: 45773

Hi Guys;
All are unused, Nos, see pic>>

http://www.baltimorepress.com/~wa2rqy/6micas-box.jpg
Price is $15.00ppd
Thanks es 73....Rich WA2RQY (1961)
WA2RQY's "confusion Radio" Web-Page
Http://members.aol.com/rlucch2098/index.html
RLUCCH2098@aol.com
"Keep those heaters on"

1882. Re: switching RF using cmos ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-07 19:28:49 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <a68f1g$s1v$2@knossos.btinternet.com>
Source record: 45774

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
news:3c8734e1.2384377@news.freeserve.net...
> Has anyone used cmos switches for low levels of RF (up to +17dBm)
> does it work or not?
> if so, what losses/problems were encountered?
> thanks Mike W, G8NXD qthr.
>

CMOS switches are often used effectively in mixers, so they should be OK.

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.con
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

1883. Re: Battery assisted power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-07 19:29:14 UTC
From: Sylvan Butler <Znospam+noZs_0203@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrna8ffu8.cmp.Znospam+noZs_0203@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 45788

On Wed, 06 Mar 2002 22:07:22 GMT, G. Skiffington <skiffing@nbnet.nb.ca> wrote:
> a side benefit
> of using the 18v is obviously that you have much more time available at
> rated (regulated) voltage for your equipment (as you obviously know).

NOT!

That would be true IF and only if he was using a switching
regulator. A typical linear reg will simply waste the excess power
as heat.

I don't think the 18v approach is worth the hassle and expense.

Now if you happen across some 2v cells (BIG batteries, e.g.
forklifts, etc.) are often sold as single cells) then use 7 cells
instead of 6 and you get a nominal 14v (14.7v full, 16.1v float)
battery. No regulator needed when not on charge, but watch the
float and charge voltage as it is a bit high for some equipment.
Floating at 15.8v would probably be OK.

But overall I agree with the "keep it simple" folks. Just use a
single marine or RV "deep cycle" (not "starting") battery. It
should float at 13.8v and run 12.6v (full) to 11v (empty) during
use. This is fine for nearly everything.

sdb

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. ##### change ^ to @ ##### |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Fight terrorism, arm the population!

1884. Re: switching RF using cmos ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-07 19:31:12 UTC
From: k7itm@aol.com
Message-ID: <3200347.0203071131.2c96c84d@posting.google.com>
Source record: 45775

For the work I do professionally in spectral analysis instrumentation, I can use cmos switches in the signal path, but only where the load on the output side of the switch is a high impedance. The variation in switch resistance as the input voltage changes (over a cycle) results in too much distortion for my applications, if the output load is too low an impedance. (Commonly the load isn't such a high impedance, and we use relays instead of fet switches.) Other than that, just pay attention to the data sheet specs on things like capacitance and isolation. The switches rated for video applications should have enough data to make reasonable decisions about whether they will work for you or not.

Cheers,
Tom

mike@corn2.freeserve.co.uk (Mike W) wrote in message news:<3c8734e1.2384377@news.freeserve.net>...
> Has anyone used cmos switches for low levels of RF (up to +17dBm)
> does it work or not?
> if so, what losses/problems were encountered?
> thanks Mike W, G8NXD qthr.

1885. WTB Parts For HB Rcvrs.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-07 21:13:45 UTC
From: Byron Tatum <bjtatum@ev1.net>
Message-ID: <3c87d750_1@newsa.ev1.net>
Source record: 45776

Hello- I am looking for National XR-50 coil forms, Miller 912-series 455 Khz. IF transformers, and any other 50, 100, 262, 455, 1.6 Mhz. IF transfomers. Would also be interested in various Miller, Millen, Meissner RF-IF transformers. Thanks, Byron, WA5THJ.

1886. Re: Parasitics of SMD resistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-07 21:21:30 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C87D9DA.F2711ECE@ieee.org>
Source record: 45777

Peter,

I would check out American Technical Ceramics.

http://www.atceramics.com/index.html

They make both resistors and capacitors, and I know that they have a lot of details on characterizing their capacitors. A quick look on their page did not reveal the same for resistors, but I will bet that an E-mail to them would provide valuable information.

If you find it, please share with us.

73s,

Clyde
KA1CRV

Peter Bolch wrote:

> Hi
>
> I have searched the web sites of quite some manufacturers of SMD resistors
> but could not find detailled information about the parasitics of resistors.
>
> In an application note I found that with a 0603 1k resistor there is a 1.7
> nH inductor in series with the resistor.
>
> Can someone here provide more information?
>
> Peter

1887. GenRad - what is that goop?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-07 21:23:40 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <wTQh8.101349$nz4.8961582@bin4.nnrp.aus1.giganews.com>
Source record: 45778

I'm rebuilding the power supply of a GenRad 1933 sound level meter (circa 1977 or thereabouts). A couple diodes in the switcher were shot so I have replaced these. One difficulty which I encountered, however, is the paraffinic or plastic coating GR used to protect the circuitry from the elements and leaky batteries. I used Xylol (which I guess is something like an alcohol cousin of xylene) to dissolve a bit of it (so I could solder in the new diodes.) But I really don't like using these solvents within the enclosed area of my workshop. Anyone know the makeup of the resin which GR used?

1888. Old tube type Email List - No Nonsence

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-07 21:44:03 UTC
From: Eugene Rippen <soundval@foothill.net>
Message-ID: <a68nq3$5v9$1@nntp.foothill.net>
Source record: 45779

There is a no nonsence email list (reflector) 4 years old now.
It is for buying and selling old tube type gear and their
accessories ONLY.
No discussions, no arguments, not intended to be
friendly, nor unfriendly.
Unless an item is very unusual, prices are required.
At the present time, no annoucements of auctions.

The email list is baswaplist@foothill.net
The list is as spam proof as they get. We have not had
any spam in over a year now.
It has always been free, and contains no commercial
advertising.
We use plain text only, no HTML, etc.
Attached pictures (jpg, etc) are no allowed, however
links to them are incouraged.
Expect to receive 5 - 15 emails per day, from people
wanting to buy or sell old tube type stuff.

TO join the list:

SEND TO: majordomo@foothill.net
SUBJECT: (does not matter)
MESSAGE: subscribe baswaplist
(That is ALL you say in the body of the message.
the email address from which the message is sent
will be the address subscribed to the list.)

Eugene Rippen, WB6SZS
(List manager)

1889. Re: 5 dollar emails

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 02:25:44 UTC
From: George Gleason <g.p.gleason@worldnet.att.net>
Message-ID: <IiVh8.21299$gK2.1580087@bgtnsc04-news.ops.worldnet.att.net>
Source record: 45780

<zhkwze@comcast.net> wrote in message
news:n0Vh8.125053$pN4.6479415@bin8.nnrp.aus1.giganews.com...
> Please check out 5 dollars an email...I earned over $850.00 last month
simply by using this program. This company is free to join. You can get paid
and earn prizes for surfing,reading email,t aking surveys, chatting and
playing games. To read all about the program,you must click on the link and
sign up. there are no obligations Just click on the link on the mail and it
will take you to the sign-up page in a new window. Remember to refer all
your friends, as this is how you will make more money.
> GOTO
http://www.5DollarEmails.com/cgi-bin/signup.cgi?r=prowler00x@comcast.net

Everybody needs to forward this to uce@ftc.gov
George Gleason

1890. Re: Completely OT : Homebrew a Jet-Pak ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 03:12:56 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c8827db.271673053@news.erols.com>
Source record: 45781

It's taken me a day or two to get back. I can't thank all the respondents enough. A really enjoyable read. The entire web-site was a fun read -- most new to me. I remember seeing promo films or newsreels for "Flying Cars" , for instance, that showed one sorta taxing up to a suburban home. PR by Aerocar ? Who knows.

The jet-pak/Rocket-pak info was cool, if all too brief. Tantalizing was the brief mention that "some" continue to experiment with them into today. Think next time I get bored and decide to do a late-nite net crawl I'll see what else is out there on jet paks.

Regarding "those days", there is a guy around my area (Wash.D.C.) who's working on a Cold War Museum. I only met him once or twice but we have a loose connection - He's the son of Francis Gary Powers and my dad did debrief him once or twice. I only mention this because my pop has now written a book/manuscript regarding the early days of the U-2, the SR-71, and what the History Channel calls "Project Corona". Lots of techie anecdotes. Even a UFO story that beats Art Bell by a country mile! It has recieved approval by Gerald K. Haines, Historian at Langley and is awaiting final approval from Ft. Meade. There was a time when people would've died for this knowledge -- now it's just old wars stories of 30/40+ years ago. Maybe he should call his book, "Boatanchors of Intel". (Hi,Hi.) Times changes all, I suppose.

Hope the very best for all,

KG4JBM / Andrew
Reticulum

Remove "your.hat" when replying via e-mail

1891. Re: switching RF using cmos ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 03:13:21 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3C882C50.FE5AA037@cox.net>
Source record: 45782

The best RF mixer switches I know of are the CMOS bus switches available from a variety of places including TI, IDT, etc. These are designed to switch microprocessor memory address lines to one of a set of memory banks. In order to keep the delay through the part as minimal as possible, they implemented a very fast analog switch to pass the digit signals directly from the input to the output.

These are much faster than even the fastest "analog switches" that can be found else where, and are much cheaper.

The TI family of bus switches are the CBT (5v levels) and CBTLV (3.3v levels). The 5v parts will handle a 4 to 4.5v pk-pk signal, which is close to your +17 dbm. Simply make sure you provide a DC bias at about half the operating voltage (2.5v for 5v CBT stuff, 1.6v for 3.3v CBTLV stuff) and AC couple in the RF signals. The switches have a series resistance of about 5 ohms and an input C of 5 to 10 pf.

There are several useful variations. The 74CBT3125/74CBT3124 has four individually controlled CMOS switches that can be used to replace the quad diodes in the typical ring diode mixer configuration. Digital logic can be used to drive the enable lines of the switches to emulate normal diode LO switching. Far less power is required to do the switching as well, allowing for high performance in low power (QRP?) receivers.

I use the dual "1 of 4" multiplexer (74CBT3253) to get quadrature DC detection for a phased DC receiver. In this configuration, the detector has about 1 db of loss.

They seem to work very well at high signal levels and are very fast. Turn on time is 4 nsec max to 1 nsec min, which in a ring mixer configuration, should limit the upper frequency to something under 100 MHz, worst case. I would expect the losses for the ring mixer case to be the typical 5-6 db of conversion loss.

If you buy any of these parts, make sure you get the SOIC package (0.05" pin spacing) rather than the more available SSOP (0.025" pin spacing) package. Dip parts do not exist (0.1" spacing). The SSOP stuff I find very difficult to use and therefore avoid whenever possible.

I actually prefer the SOIC package when building equipment because they take up much less space and are still easy to work with. Just use #30 or #32 gauge enamel covered wire for hookup. Forget using #22 stranded!

- Dan Tayloe, N7VE; Phoenix, Az; Az ScQRPions

Mike W wrote:
>
> Has anyone used cmos switches for low levels of RF (up to +17dBm)
> does it work or not?
> if so, what losses/problems were encountered?
> thanks Mike W, G8NXD qthr.

1892. Re: GenRad - what is that goop?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 03:33:59 UTC
From: mikea@mikea.ath.cx
Message-ID: <HiWh8.2432$ya4.384038026@newssvr16.news.prodigy.com>
Source record: 45783

john walton <jdwalton@comcast.net> wrote:
: I'm rebuilding the power supply of a GenRad 1933 sound level meter (circa
: 1977 or thereabouts). A couple diodes in the switcher were shot so I have
: replaced these. One difficulty which I encountered, however, is the
: paraffinic or plastic coating GR used to protect the circuitry from the
: elements and leaky batteries. I used Xylol (which I guess is something like
: an alcohol cousin of xylene) to dissolve a bit of it (so I could solder in
: the new diodes.) But I really don't like using these solvents within the
: enclosed area of my workshop. Anyone know the makeup of the resin which GR
: used?

Actually, xylene and xylol are the same thing. Don't know anything
about the conformal coating, but I _do_ know that xylene is a
carcinogen. and that you might want to use forced ventilation in
the work area.

--
[Once in a lifetime opportunity] is simply a veiled reference to the
staff contract termination procedure, which involves a sunny wall,
a single cigarette and some middling to average marksmen...
-- Dan Holdsworth

1893. UHF CB to 70 cm band conversion possible?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 05:06:34 UTC
From: michaelunderwear@belfry.cx
Message-ID: <63926e6f.0203072106.2962ca06@posting.google.com>
Source record: 45784
Cross-posted to: rec.radio.amateur.homebrew,aus.radio.amateur.misc

I have access to an unused UHF CB transceiver. Is it feasible (or even practically possible) to convert it for operation on the 70cm amateur band? Can someone direct me to information on how this can be done?

I've searched at some obvious places but haven't found anything other than an implication that the conversion can be done, but not any how-tos.

(No, I don't have a licence;
yes, I am preparing for the exams;
no, I have no intention of operating illegally...)

Thanks,
Michael.

(To email simply remove underwear)
–

1894. Re: UHF CB to 70 cm band conversion possible?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 05:46:40 UTC
From: Matt <doormattNOSPAM@bigpond.com>
Message-ID: <faYh8.7086$uR5.5778@newsfeeds.bigpond.com>
Source record: 45785
Cross-posted to: rec.radio.amateur.homebrew,aus.radio.amateur.misc

It could likely be done, but I personally would not bother. It would likely be a reasonably expensive job, and wouldn't provide particularly good results - would be a low powered and not terribly useful piece of gear, and likely the sensitivity would be pretty average. Having said that, if you want to try the conversion game, you would be better off converting a commercial radio onto 70cm - good receivers, around 35 watts, and many more channels are possible (a Sawtron KG107 - or 109 - cannot remember) can (I think) have up to 16 banks of 100 channels which is more than you need, but much better than only 40 channels. Just make sure that you get a version that is capable of being reset for 70cm. Alternatively you could always just buy one - AWA RT85 radios set on 70cm were going for $50-70 only a couple of weeks ago - all are aparently sold out now, but keep your eyes and ears open, and you might be lucky.

Matt

Michael Bell <michaelunderwear@belfry.cx> wrote in message news:63926e6f.0203072106.2962ca06@posting.google.com...
> I have access to an unused UHF CB transceiver. Is it feasible (or
> even practically possible) to convert it for operation on the 70cm
> amateur band? Can someone direct me to information on how this can be
> done?
>
> I've searched at some obvious places but haven't found anything other
> than an implication that the conversion can be done, but not any
> how-tos.
>
> (No, I don't have a licence;
> yes, I am preparing for the exams;
> no, I have no intention of operating illegally...)
>
> Thanks,
> Michael.
>
> (To email simply remove underwear)
> _

1895. Re: UHF CB to 70 cm band conversion possible?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 06:41:04 UTC
From: roughplanet <roughplanet@optushome.com.au>
Message-ID: <3c885cf9$0$6218$afc38c87@news.optusnet.com.au>
Source record: 45786
Cross-posted to: rec.radio.amateur.homebrew,aus.radio.amateur.misc

It'd be a pretty big ask. How would you program repeater offsets?

Ruff

"Michael Bell" <michaelunderwear@belfry.cx> wrote in message
news:63926e6f.0203072106.2962ca06@posting.google.com...
>I have access to an unused UHF CB transceiver. Is it feasible (or
>even practically possible) to convert it for operation on the 70cm
>amateur band? Can someone direct me to information on how this >can be
done?
>I've searched at some obvious places but haven't found anything >other than
an implication that the conversion can be done, but not >any how-tos.
>(No, I don't have a licence; yes, I am preparing for the exams; no, >I
have no intention of operating illegally...)
>
>Thanks,
>Michael.

1896. Re: UHF CB to 70 cm band conversion possible?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 06:44:29 UTC
From: R1rob
Message-ID: <3c886916.0@mercury.planet.net.au>
Source record: 45787
Cross-posted to: rec.radio.amateur.homebrew,aus.radio.amateur.misc

what radio is it??

"Michael Bell" <michaelunderwear@belfry.cx> wrote in message
news:63926e6f.0203072106.2962ca06@posting.google.com...
> I have access to an unused UHF CB transceiver. Is it feasible (or
> even practically possible) to convert it for operation on the 70cm
> amateur band? Can someone direct me to information on how this can be
> done?
>
> I've searched at some obvious places but haven't found anything other
> than an implication that the conversion can be done, but not any
> how-tos.
>
> (No, I don't have a licence;
> yes, I am preparing for the exams;
> no, I have no intention of operating illegally...)
>
> Thanks,
> Michael.
>
> (To email simply remove underwear)
> _

1897. Re: Battery assisted power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 10:17:48 UTC
From: post_to_usenet@hotmail.com
Message-ID: <b6b4e772.0203080217.19b12954@posting.google.com>
Source record: 45789

Hi all,

Thanks for your answers.

I think I'll follow the KISS principle and go for the simplest solution:

I'll use three 12V 7AH gel batteries in parallel (very economical) and keep them charged with my old stabilized 3A power supply (wich has reverse diodes to protect it from discharging the batteries into the PSU).

They should give enought current, as we used to use them for underwater video feeding two 12V 50W halogen lamps and the camera (~10A); A new battery lasted about 25 minutes. (If anyone is interested, ordinary indoor 12V halogen lamps work very well underwater -they are "water cooled"- with the only condition of sealing the front glass joint with some epoxy and the wire connections with some silicone).

As has been mentioned it is possible that power is reduced by 10~15% by the fact of using the "12 and something" volts of the battery instead of the 13.8~14.5 nominal, but this is less than 1 dB, so it should be OK

Thanks again.

Toni

1898. Re: UHF CB to 70 cm band conversion possible?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 11:07:28 UTC
From: Andrew Bonney <slator@dingbloo.com>
Message-ID: <gT0i8.7272$uR5.6502@newsfeeds.bigpond.com>
Source record: 45790
Cross-posted to: rec.radio.amateur.homebrew,aus.radio.amateur.misc

"Michael Bell" <michaelunderwear@belfry.cx> wrote in message
news:63926e6f.0203072106.2962ca06@posting.google.com...
> I have access to an unused UHF CB transceiver. Is it feasible (or
> even practically possible) to convert it for operation on the 70cm
> amateur band? Can someone direct me to information on how this can be

anything can be done, depending on what radio you have been offered decides
if its worth doing.

The Sawtron 880 for example was an easy conversion, and article even
appeared in ARA on how to do it.
The Philips FM-320 was a little more work but not impossible as there was
also a 70cm version sold as the FM-321. It would involve some retuning, work
on coils and a repeater offsett board made (which is simple), other radios
like Unidens/Electrophones would probably require more work.
When its all said and done your better off picking up a used dedicated HAM
type 70cm set with memorys, splits, direct freq readout and features,
forget old commercial radios----who wants to stuff around with a channel
chart. A dedicated 70cm set these days would be worth less than a CB anyway
as ham radio is just about dead in this country.

1899. Re: Battery assisted power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 12:20:52 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <u8hb5eg90faebe@corp.supernews.com>
Source record: 45791

Another issue to consider. Hooking 12 volt SLA batteries directly across a 13.8 volt supply works fine to keep the batteries charged (a float charge). The problem comes if you ever let the batteries discharge, say to 10 volts, during a power outage. When the power is reapplied to the supply, the batteries will attempt to draw a high current until they become charged enough for their voltage to rise. If they draw more than 3 amps and your supply does not have a current limiter then you could cook the supply. 14 AH worth of SLAs will likely have a maximum bulk charge rate limit of about 2 amps. If your supply can source more than that then the batteries may draw more than they are rated for and cook the batteries (or at least shorten their useful service life). If you are bulding an unattended backup system then you should have a current limiter set to the maximum bulk charge rate specified for the batteries being used.

For an unattended system the other thing to consider is a low voltage cut out. It is hard on the SLA batteries if you were not present, the AC power was out, and the gear continued to run and discharge the batteries below about 10 volts.

1900. Re: switching RF using cmos ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 13:24:54 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0203080524.3e43c187@posting.google.com>
Source record: 45792

I agree.

I would not trust CMOS switches in critical applications.

We had some high speed (64 MHz) digitizers (A/D, digital receiver, and DSP all in one box) here that has a CMOS switch ahead of the A/D.

The switch introduces so much distortion that the things are practically unuseable. We are now using one that does not have anything ahead of the A/D, and the difference is like night and day!

Granted, our application is more critical than the typical hobbiests, and they may be OK in less demanding applications.

Jim
N8EE

k7itm@aol.com (Tom Bruhns) wrote in message news:<3200347.0203071131.2c96c84d@posting.google.com>...
> For the work I do professionally in spectral analysis instrumentation,
> I can use cmos switches in the signal path, but only where the load on
> the output side of the switch is a high impedance. The variation in
> switch resistance as the input voltage changes (over a cycle) results
> in too much distortion for my applications, if the output load is too
> low an impedance. (Commonly the load isn't such a high impedance, and
> we use relays instead of fet switches.) Other than that, just pay
> attention to the data sheet specs on things like capacitance and
> isolation. The switches rated for video applications should have
> enough data to make reasonable decisions about whether they will work
> for you or not.
>
> Cheers,
> Tom
>
> mike@corn2.freeserve.co.uk (Mike W) wrote in message news:<3c8734e1.2384377@news.freeserve.net>...
> > Has anyone used cmos switches for low levels of RF (up to +17dBm)
> > does it work or not?
> > if so, what losses/problems were encountered?
> > thanks Mike W, G8NXD qthr.

1901. FS: 100's of TUBES @ $.35 each

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 16:16:55 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <Xt5i8.3696$Y75.220093@news1.west.cox.net>
Source record: 45793
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Please email w6krc@arrl.net for list.

1902. MFJ 259 Antenna Analyser- calibraton help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 16:23:35 UTC
From: Brian Reay <brian.reay@bigfoot.com>
Message-ID: <Zy5i8.10544$bJ4.1866945@news2-win.server.ntlworld.com>
Source record: 45794

Hi,

I seem to have jyst managed to repair the clubs MFJ 259 antenna analyser but, in the many halds it has passed though, the calibration pots seem to have been 'twiddled'.

I only have limited data on the beast but it appears that the 4 pots are:

1. RF level control / agc

2. SWR cal

3. Load resistance cal

4. Frequency counter DC bias- which seems to bias the i/p of the internal counter to maintain its sensitivity?

I've tried the obvious setting process- try to get the level and dc bias right then set up SWR and Load resistance with a couple of dummy loads etc- but it just won't calibrate as accurately as I would expect and the internal oscillator is easily 'pulled' by the load which, given it has two cascade buffers between the oscillator and the load I would not expect- my theory is the AGC loop settig is the problem.

Anyone have any details or done this before, please?

73

Brian
G8OSN
http://freespace.virgin.net/brian.reay

1903. generating 19khz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 17:35:43 UTC
From: jimbo@123unknown.demon.co.uk
Message-ID: <3c88f5eb.2453357@news.demon.co.uk>
Source record: 45795

I wonder if someone can help me. Im building a stereo coder which asks for a 4864khz xtal. Now these things are hard to find. So, i want to generate this 19khz another way. Ive thought about using a cr circuit but im not sure if this will be stable enough.

Any ideas?

Thanks

Jimbo

1904. Re: MFJ 259 Antenna Analyser- calibraton help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 18:06:48 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.com>
Message-ID: <Se4iulB42Pi8EAah@ifwtech.com>
Source record: 45800

Brian Reay wrote:
>Hi,
>
>I seem to have jyst managed to repair the clubs MFJ 259 antenna analyser
>but, in the many halds it has passed though, the calibration pots seem to
>have been 'twiddled'.
>
>I only have limited data on the beast but it appears that the 4 pots are:
>
>1. RF level control / agc
>
>2. SWR cal
>
>3. Load resistance cal
>
>4. Frequency counter DC bias- which seems to bias the i/p of the internal
>counter to maintain its sensitivity?
>
>
>I've tried the obvious setting process- try to get the level and dc bias
>right then set up SWR and Load resistance with a couple of dummy loads etc-
>but it just won't calibrate as accurately as I would expect and the internal
>oscillator is easily 'pulled' by the load which, given it has two cascade
>buffers between the oscillator and the load I would not expect- my theory is
>the AGC loop settig is the problem.
>
>Anyone have any details or done this before, please?
>
Yes - http://www.vhfman.freeuk.com/radio/analyser.html

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.com/g3sek

1905. Re: generating 19khz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 19:36:02 UTC
From: Frank <fworm@norpak.ca>
Message-ID: <3C893CE2.20103@norpak.ca>
Source record: 45796

Why not a 19Khz crystal
from digi-key?

Jimbo wrote:

> I wonder if someone can help me. Im building a stereo coder which asks
> for a 4864khz xtal. Now these things are hard to find. So, i want to
> generate this 19khz another way. Ive thought about using a cr circuit
> but im not sure if this will be stable enough.
>
> Any ideas?
>
> Thanks
>
> Jimbo
>

1906. Re: generating 19khz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 19:52:33 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <a6b4q0$lq0$1@helle.btinternet.com>
Source record: 45797

"Jimbo" <jimbo@123unknown.demon.co.uk> wrote in message
news:3c88f5eb.2453357@news.demon.co.uk...
> I wonder if someone can help me. Im building a stereo coder which asks
> for a 4864khz xtal. Now these things are hard to find. So, i want to
> generate this 19khz another way. Ive thought about using a cr circuit
> but im not sure if this will be stable enough.

Getting one-off crystals made isn't very expensive. I can get them for about
10 UK pounds for a frequency like the one you are after.

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.con
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

1907. HELP IN OLD QST....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 19:53:27 UTC
From: JM CHERRY <jmc@dproducts.be>
Message-ID: <3c891699$0$33510$ba620e4c@news.skynet.be>
Source record: 45798

Hi all,

To complete the R.L. Drake Museum Vitual pages, I Need a copy or 300 dpi gey scanning of the QST Years 1957, 1960, 1962, 1968 and 1968..; PLEASE HELP !

All other years are on Museum pages... This was lot of work for me and all the OM's who send me files. thanks to all.

73,

JM CHERRY
http://www.dproducts.be
http://www.dproducts.be/drake_museum

1908. Re: generating 19khz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 19:58:53 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u8i60439ccol3a@corp.supernews.com>
Source record: 45799

Well, a 19 KHz crystal is pretty hard to come by.....

Assuming you are dividing the 4.8 MHz down to 19 KHz, why not just buy a programmable Epson oscillator for 4.864 MHz. These things are like $3.50 and if you order it before around 5 PM, DigiKey will still program it the same day.

Well, OK, looking at the headers it appears you may be in the U.K. so maybe getting it programmed in a couple hours won't be a big deal. The shipping alone will be ten times the price of the part! But maybe there's a local source. These things are awfully handy. I think there can be a little phase noise issues with them but after you've done a divide by 256 I doubt it will be visible.

..

"Frank" <fworm@norpak.ca> wrote in message news:3C893CE2.20103@norpak.ca...
> Why not a 19Khz crystal
> from digi-key?
>
> Jimbo wrote:
>
> > I wonder if someone can help me. Im building a stereo coder which asks
> > for a 4864khz xtal. Now these things are hard to find. So, i want to
> > generate this 19khz another way. Ive thought about using a cr circuit
> > but im not sure if this will be stable enough.
> >
> > Any ideas?
> >
> > Thanks
> >
> > Jimbo
> >
>

1909. Re: Battery assisted power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 20:26:30 UTC
From: Sylvan Butler <Znospam+noZs_0203@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrna8i7lm.f4f.Znospam+noZs_0203@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 45814

On Fri, 8 Mar 2002 07:20:52 -0500, Bob Lewis (AA4PB) <rlewis@staffnet.com> wrote:
> discharge, say to 10 volts, during a power outage. When the power is
> reapplied to the supply, the batteries will attempt to draw a high
> current until they become charged enough for their voltage to rise. If
> they draw more than 3 amps and your supply does not have a current
> limiter then you could cook the supply. 14 AH worth of SLAs will

> useful service life). If you are bulding an unattended backup system
> then you should have a current limiter set to the maximum bulk charge
> rate specified for the batteries being used.

Cheap man's "current limiter" == resistor, or put a 12v lamp of the
proper wattage in series, or put in a 100ft spool of proper gauge
wire ;) . If you want a max of 2 amps out of the supply, connect it
with a series resistor of 0.5ohm to 1.0ohm (a 5 watt should do
nicely) That will drop 1v-2v at 2amps, reducing the output of the
supply as the load gets too high. A lamp has the nice
characteristic of being non-linear...

> For an unattended system the other thing to consider is a low voltage
> cut out. It is hard on the SLA batteries if you were not present, the

Yup. But if present, just turn off the load.

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. ##### change ^ to @ ##### |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Fight terrorism, arm the population!

1910. Big cumfy radio tuning knob.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 21:28:56 UTC
From: Cathryn Mataga <cathryn@junglevision.com>
Message-ID: <3C892D18.8050006@junglevision.com>
Source record: 45802

Is there a place to buy, or way to make, like the title says, a big cumfy tuning knob -- like on a Japanese radio? I'm not worried about the electronics so much as just getting a knob that physically feels really good. One that has some weight and when you turn it rotates smoothly and has a momentum. That is if you spin it, it'll keep spinning for a little bit. I assume it'd work like some kind of optical deal, maybe like the insides of a mouse.

Anyway, is this kind of thing you can just buy? Or do you have to build it?

1911. Re: Completely OT : Homebrew a Jet-Pak ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 21:32:17 UTC
From: Screaming Skull <KG4IVT@hot.mail.spicedmeat.sucks.leave.me.alone.com>
Message-ID: <B5ai8.14650$y65.2737941@typhoon.southeast.rr.com>
Source record: 45801

You wouldn't happen to know where this Cold War Museum is going to be do
you? I live across the street from an old Nike Missile base and there were
talks of putting in some sort of museum there. I doubt it it what you are
talking about but just in case.....

Thanks.

> Regarding "those days", there is a guy around my area (Wash.D.C.)
> who's working on a Cold War Museum. I only met him once or twice but
> we have a loose connection - He's the son of Francis Gary Powers and
> my dad did debrief him once or twice. I only mention this because my pop
> has now written a book/manuscript regarding the early days of the U-2,
> the SR-71, and what the History Channel calls "Project Corona". Lots of
> techie anecdotes. Even a UFO story that beats Art Bell by a country mile!
> It has recieved approval by Gerald K. Haines, Historian at Langley and is
> awaiting final approval from Ft. Meade. There was a time when people
> would've died for this knowledge -- now it's just old wars stories of
30/40+
> years ago. Maybe he should call his book, "Boatanchors of Intel". (
Hi,Hi.)
> Times changes all, I suppose.
>
> Hope the very best for all,
>
> KG4JBM / Andrew
> Reticulum
>
> Remove "your.hat" when replying via e-mail

1912. Re: UHF CB to 70 cm band conversion possible?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 21:51:18 UTC
From: Peter Parker <parkerp@alphalink.com.au>
Message-ID: <3c8932fb@news.alphalink.com.au>
Source record: 45803
Cross-posted to: rec.radio.amateur.homebrew,aus.radio.amateur.misc

"Andrew Bonney" <slator@dingbloo.com> wrote in message
news:gT0i8.7272$uR5.6502@newsfeeds.bigpond.com...

>A dedicated 70cm set these days would be worth less than a CB anyway

70cm-only sets would be quite old by now. Most equipment these days covers
at least 2m/70cm.

> as ham radio is just about dead in this country.

That's news to me.

So when I sit here watching amateur TV on my rabbits ears,
while simultaneously transmitting slow scan pictures of homebrew projects, I
am
actually halucinating? Very strange when I flick to receive and I see
others sending
pictures. And if one doesn't care swapping pictures, one could do PSK-31
on 20m,
or try for DX on CW or SSB. And if neither appeals, there is always a pile
of projects
to tackle.

Then, how about the hamfests - There's four I can think of in the next
couple of months,
and that's just around Melbourne? You even see people selling gear and
others carrying
equipment away under their arms from these events - is this imagination as
well?

The number of amateur radio clubs around Australia compares well with other
sporting/recreational pursuits. The network of club newsletters, news
bulletins,
websites, club nets, meetings etc is also a credit to amateurs.

IRLP has already been mentioned. This mode has already attracted good
coverage in the Age
and SMH. One could go on about the Field Day contest that local clubs are
busy preparing for,
the upcoming Radio on Rails, or the talk on amateur satellites that
attracted 90 people to the Moorabbin Radio Club just 2 weeks ago. These
people wouln't have come if they weren't interested.

This is a particularly busy time of year for amateur radio activity. If
you're saying it's dead, maybe you're not looking hard enough, or are
envious of people having more fun than you!

Peter Parker VK3YE

Publicity Officer
Moorabbin & District Radio Club

>
>
>
>

1913. Re: generating 19khz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 22:16:23 UTC
From: Martin Farrell <Martin@hobbit.demon.co.uk>
Message-ID: <MAHwM4J3gTi8EwpW@hobbit.demon.co.uk>
Source record: 45804

In message <3c88f5eb.2453357@news.demon.co.uk>, Jimbo
<jimbo@123unknown.demon.co.uk> writes
>I wonder if someone can help me. Im building a stereo coder which asks
>for a 4864khz xtal. Now these things are hard to find. So, i want to
>generate this 19khz another way. Ive thought about using a cr circuit
>but im not sure if this will be stable enough.
>
>Any ideas?

I've used a 455kHz ceramic resonator with a series cap to get 456kHz.
Divide by 12 (3 then 4) to get 38k which I assume you'll need for a
coder and another 2 for 19k. I've never had any difficulty with
stability and it's cheap!

--
Martin Farrell

1914. Re: Repeat Coils Telco p/n REP-111C or similar

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-08 23:56:09 UTC
From: Terry <tsanford@nf.sympatico.ca>
Message-ID: <3C894F99.4BC1E310@nf.sympatico.ca>
Source record: 45805

Charles Beard wrote:
>
> Does any one on the list know where i can find some REP-111C repeat coils. They
> were used on all metallic broadcast loops.
>
> I need at least 8 or more.
>
> Charles Beard
> chb890@swbell.net
> 877-341-2337 off
> 800-994-3013 Cellular
> Charles H. Beard
> CSSI
> 905 Palo Pinto St.,Weatherford,Tx. 76086-4135
> FAX 877-613-0230
> e-mail chb890@aol.com / chb890@swbell.net

Charles: My recollection of cable pair and open wire
circuits for both VF and 'carrier' is that 'repeat coils'
are isolating transformers, often with two primary and two
secondary windings? Don't recall the 111C in particular
though.
An alternative might be Hammond type 604 transformers? email
if you wish. Terry. Ex telco.

1915. Re: Repeat Coils Telco p/n REP-111C or similar

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-09 00:26:56 UTC
From: Gary Glaenzer <nobulltrans@mchsi.com>
Message-ID: <kFci8.5681$Yv2.1446@rwcrnsc54>
Source record: 45806

"Terry" <tsanford@nf.sympatico.ca> wrote in message
news:3C894F99.4BC1E310@nf.sympatico.ca...
>
>
> Charles Beard wrote:
> >
> > Does any one on the list know where i can find some REP-111C repeat
coils. They
> > were used on all metallic broadcast loops.
> >
> > I need at least 8 or more.
> >
> > Charles Beard
> > chb890@swbell.net
> > 877-341-2337 off
> > 800-994-3013 Cellular
> > Charles H. Beard
> > CSSI
> > 905 Palo Pinto St.,Weatherford,Tx. 76086-4135
> > FAX 877-613-0230
> > e-mail chb890@aol.com / chb890@swbell.net
>
> Charles: My recollection of cable pair and open wire
> circuits for both VF and 'carrier' is that 'repeat coils'
> are isolating transformers, often with two primary and two
> secondary windings? Don't recall the 111C in particular
> though.
> An alternative might be Hammond type 604 transformers? email
> if you wish. Terry. Ex telco.

two winding primary and two secondary

each winding 300 ohms, roughly

parallel them for 150 ohms, series them for 600

if you can find a place that sells reconditioned telephone systems you might
be able to get them there

what are you building that takes 8 of them?

1916. Re: Big cumfy radio tuning knob.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-09 01:19:29 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u8iop95bc2qlf0@corp.supernews.com>
Source record: 45807

The "some kind of optical deal" is an optical encoder. They are available at most electronic houses, and for inputting frequency (or whatever) into a PIC or microcontroller of your choice, they are pretty convenient. However, they are a bit pricey - $30-50 or so. Mechanical ones are a lot cheaper ($3-8) but they don't have the nice feel, or the resolution.

Some people with more mechanical skills than I have made them from a mouse, it's basically the same thing.

As far as the knob itself, there has been a lot of discussion of that on the various QRP reflectors. Seems like the best plan is going to the radio manufacturer and buying it as a replacement part. Knobs are expensive anyway, and really fancy knobs are expensive enough that there is apparently not enough of a market to sell them, so the really nice ones are custom made. There was a general agreement on the Elecraft reflector that one of the Yaseau models had the nicest knob, but I don't recall which model. You might check the archives. But as I recall, it wasn't as expensive as I would have expected. Seems like it was in the $20-30 range, really not bad considering a pretty plain knob is hard to come by for under $5-10 in larger sizes.

..

"Cathryn Mataga" <cathryn@junglevision.com> wrote in message news:3C892D18.8050006@junglevision.com...
> Is there a place to buy, or way to make, like the title says, a big cumfy
> tuning knob -- like on a Japanese radio? I'm not worried about the electronics
> so much as just getting a knob that physically feels really good. One that
> has some weight and when you turn it rotates smoothly and has a momentum.
> That is if you spin it, it'll keep spinning for a little bit. I assume
> it'd work like some kind of optical deal, maybe like the insides of a mouse.
>
> Anyway, is this kind of thing you can just buy? Or do you have to build
> it?
>

1917. Re: Parasitics of SMD resistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-09 01:23:56 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3C89642C.8265BB01@sympatico.ca>
Source record: 45808

One thing to be careful of is not the part itself but the layout, particularly thin traces and punching down to inner pcb layers through vias, these can add significant inductance (which can destroy the usefulness of bypass caps if layout is done poorly).

"Clyde R. Shappee" wrote:

> Peter,
>
> I would check out American Technical Ceramics.
>
> http://www.atceramics.com/index.html
>
> They make both resistors and capacitors, and I know that they have a lot of
> details on characterizing their capacitors. A quick look on their page did not
> reveal the same for resistors, but I will bet that an E-mail to them would
> provide valuable information.
>
> If you find it, please share with us.
>
> 73s,
>
> Clyde
> KA1CRV
>
> Peter Bolch wrote:
>
> > Hi
> >
> > I have searched the web sites of quite some manufacturers of SMD resistors
> > but could not find detailled information about the parasitics of resistors.
> >
> > In an application note I found that with a 0603 1k resistor there is a 1.7
> > nH inductor in series with the resistor.
> >
> > Can someone here provide more information?
> >
> > Peter

1918. Re: B2 RADIO ! We're spanking gorgeous !

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-09 01:28:09 UTC
From: Stagger Lee <SLee@houston-hunks.com>
Message-ID: <3C896529.F5EB91B@houston-hunks.com>
Source record: 45809
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.scanner,alt.cocksucker.roger-wiseman

B2RADIO wrote:
>
> B2:RADIO! is a live broadcast internet radio station hosted by the good
> people at Live365.com and promises to have a good poke around the vile
> underbelly of Internet society.

Does this post mean that you're going to be featuring Roger Wiseman's
Greyhound Men's Room Band?

P L E A S E S A Y I T I S N ' T S O ! ! ! !

1919. Re: Completely OT : Homebrew a Jet-Pak ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-09 02:52:04 UTC
From: Cathexis@yourhaterols.com
Message-ID: <3c8975ef.357209588@news.erols.com>
Source record: 45811

On Fri, 08 Mar 2002 21:32:17 GMT, "Screaming Skull"
<KG4IVT@hot.mail.spicedmeat.sucks.leave.me.alone.com> wrote:

>You wouldn't happen to know where this Cold War Museum is going to be do
>you? I live across the street from an old Nike Missile base and there were
>talks of putting in some sort of museum there. I doubt it it what you are
>talking about but just in case.....
>
<snip>

Here's a smattering of info,.....

http://www.coldwar.org/

http://ed-thelen.org/powers-background-2001.html

http://www.coalitionoffamilies.org/cold_war_museum.html

many other links out there.

The "Spy Tour" is a Wash. D.C. must that many tourists miss.
If you've EVER enjoyed a spy documentary on History Channel you'll
like the tour. And where but D.C. could you have one ?? As a kid, I
used to sometimes play in the park where FBI mole, Hansson made
some of his drops.

As to your Nike base, the Anne Arundel Radio Club in MD has
earned the envy of many local ARC's because they got into a plot of
land with a comm tower on it and a couple above-ground bldgs. that
was owned by the county, but used to be a Nike base. Cost for a just
group of dutiful citizens like an amateur radio club ?? $1.00 US per year.
Yep. Consider that. There have also been news reports of couples who
have homesteaded in old missle silos. Public land you know. Consider.

73, Andrew / KG4JBM

Reticulum

Remove "your.hat" when replying via e-mail

1920. Re: 5 dollar emails

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-09 03:05:17 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrna8iuvd.qmt.QSB@animas.frontier.net>
Source record: 45812

```
On Fri, 08 Mar 2002 02:25:44 GMT, George Gleason scribbled:
>
> Everybody needs to forward this to uce@ftc.gov
> George Gleason

No, they don't.
Forward it with headers to abuse@comcast.com , as explained in
the OP's X-headers.

Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK
```

1921. Re: UHF CB to 70 cm band conversion possible?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-09 04:07:53 UTC
From: Richard Murnane <richardm@zeta.org.au>
Message-ID: <aTfi8.160$k6.17922@nasal.pacific.net.au>
Source record: 45813
Cross-posted to: rec.radio.amateur.homebrew,aus.radio.amateur.misc

"Peter Parker" <parkerp@alphalink.com.au> wrote in message
news:3c8932fb@news.alphalink.com.au...
>
> "Andrew Bonney" <slator@dingbloo.com> wrote in message
> news:gT0i8.7272$uR5.6502@newsfeeds.bigpond.com...

> > as ham radio is just about dead in this country.
>
> That's news to me.

Peter, I think what Andrew meant was that *his* interest in ham radio is
just about dead. Which makes me wonder why he's hanging around this
newsgroup :-)

73 Richard VK2SKY

1922. Re: Completely OT : Homebrew a Jet-Pak ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-09 06:20:23 UTC
From: Screaming Skull <KG4IVT@hot.mail.spicedmeat.sucks.leave.me.alone.com>
Message-ID: <HQhi8.15917$y65.3141089@typhoon.southeast.rr.com>
Source record: 45815

WOW, I've lived her most of my life and never heard of this thing. In fact it was only a few years ago that I learned of the Nike Missile bases around this area having moved to Great Falls, Va. Thanks for the info. I think I may have to start hanging out with the Anne Arundel folks more :-)

> The "Spy Tour" is a Wash. D.C. must that many tourists miss.
> If you've EVER enjoyed a spy documentary on History Channel you'll
> like the tour. And where but D.C. could you have one ?? As a kid, I
> used to sometimes play in the park where FBI mole, Hansson made
> some of his drops.
>
> As to your Nike base, the Anne Arundel Radio Club in MD has
> earned the envy of many local ARC's because they got into a plot of
> land with a comm tower on it and a couple above-ground bldgs. that
> was owned by the county, but used to be a Nike base. Cost for a just
> group of dutiful citizens like an amateur radio club ?? $1.00 US per year.
> Yep. Consider that. There have also been news reports of couples who
> have homesteaded in old missle silos. Public land you know. Consider.
>
> 73, Andrew / KG4JBM
>
> Reticulum
>
> Remove "your.hat" when replying via e-mail

1923. Re: Big cumfy radio tuning knob.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-09 07:02:28 UTC
From: Cathryn Mataga <cathryn@junglevision.com>
Message-ID: <3C89B384.8070007@junglevision.com>
Source record: 45816

xpyttl wrote:
> The "some kind of optical deal" is an optical encoder. They are available
> at most electronic houses, and for inputting frequency (or whatever) into a
> PIC or microcontroller of your choice, they are pretty convenient. However,
> they are a bit pricey - $30-50 or so. Mechanical ones are a lot cheaper
> ($3-8) but they don't have the nice feel, or the resolution.
>
> Some people with more mechanical skills than I have made them from a mouse,
> it's basically the same thing.
>
> As far as the knob itself, there has been a lot of discussion of that on the
> various QRP reflectors. Seems like the best plan is going to the radio
> manufacturer and buying it as a replacement part. Knobs are expensive
> anyway, and really fancy knobs are expensive enough that there is apparently
> not enough of a market to sell them, so the really nice ones are custom
> made. There was a general agreement on the Elecraft reflector that one of
> the Yaseau models had the nicest knob, but I don't recall which model. You
> might check the archives. But as I recall, it wasn't as expensive as I
> would have expected. Seems like it was in the $20-30 range, really not bad
> considering a pretty plain knob is hard to come by for under $5-10 in larger
> sizes.
>

Good idea. I'll call up Icom/Yaesu/Kenwood or somebody like that and see what I can
come up with. (And, for me, the knob is really almost the whole project, so
I don't mind dropping a few bucks for the 'optical encoder.')

> ..
>
> "Cathryn Mataga" <cathryn@junglevision.com> wrote in message
> news:3C892D18.8050006@junglevision.com...
>
>>Is there a place to buy, or way to make, like the title says, a big cumfy
>>tuning knob -- like on a Japanese radio? I'm not worried about the
>>
> electronics
>
>>so much as just getting a knob that physically feels really good. One
>>
> that
>
>>has some weight and when you turn it rotates smoothly and has a momentum.
>>That is if you spin it, it'll keep spinning for a little bit. I assume
>>it'd work like some kind of optical deal, maybe like the insides of a
>>

> mouse.
>
>>Anyway, is this kind of thing you can just buy? Or do you have to build
>>it?
>>
>>
>
>

1924. Re: UHF CB to 70 cm band conversion possible?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-09 09:37:01 UTC
From: Michael Bell <michaelb@belfry.cx>
Message-ID: <87zo1iytdu.fsf@belfry.cx>
Source record: 45810
Cross-posted to: rec.radio.amateur.homebrew,aus.radio.amateur.misc

I asked:

> > I have access to an unused UHF CB transceiver. Is it feasible (or
> > even practically possible) to convert it for operation on the 70cm
> > amateur band? Can someone direct me to information on how this can be
> > done?

"R1rob" <@> writes:
> what radio is it??

A GME Electrophone TX472S, the mining industry's staple.

It sounds like doing anything to it isn't worth the effort. The idea
only occurred to me because it would be an educational project and
give me something to play with while I'm working on my Morse. At the
moment my principal interests are building things and HF.

--
Michael Bell
Kalgoorlie, Western Australia.

GnuPG fingerprint: E3E4 31C6 6FE6 B4F7 4279 5F48 D417 C044 ECD6 38AB

Remove underwear to reply

1925. J-pole query, with a diference

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-09 10:58:53 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c89e95a.1907742@news.freeserve.net>
Source record: 45817

Hi folks,
Take a j-pole vertically mounted on top of a mast.
Disconnect the feed line from the conventional feedpoint and connect
it to the centre of the 1/2wave radiating element, as if it were a
vertical dipole with a 1/4wave stub on the lower element.
would that feedpoint be the same match as for a normal dipole?.
Just a, possibly, silly idea.
cheers Mike W

1926. Re: B2 RADIO ! We're spanking gorgeous !

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-09 11:34:32 UTC
From: AB8MQ <kc8jbo@alt.net>
Message-ID: <a6cuatmdc7@pita.alt.net>
Source record: 45818
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.scanner,alt.cocksucker.douglas-gerry

"Stagger 'TexASS TURD' Lee" <SLee@houston-hunks.com> wrote in message
news:3C896529.F5EB91B@houston-hunks.com...
> B2RADIO wrote:
> >
> > B2:RADIO! is a live broadcast internet radio station hosted by the good
> > people at Live365.com and promises to have a good poke around the vile
> > underbelly of Internet society.
>
> Does \ /

Anonymous coward and all-around fuckwit
"Stagger Lee" <SLee@houston-hunks.com>
revealed what a hypocrite he is and ironically admits he has no credibility
in message
<3C36FDCC.76EC185D@houston-hunks.com> :

"Therefore, I find your story difficult to believe. Your own anonymous
status makes the story even less credible."

Stagger Lee will try to cheat you by selling you non-fucntional equipment,
just like he's done to a few hams at hamfests in the past.
--
Anonymous coward and all-around fuckwit
"Stagger Lee" <SLee@houston-hunks.com>
revealed what a hypocrite he is and ironically admits he has no credibility
in message
<3C36FDCC.76EC185D@houston-hunks.com> :

"Therefore, I find your story difficult to believe. Your own anonymous
status makes the story even less credible."

1927. Re: GenRad - what is that goop?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-09 13:00:07 UTC
From: Mark Hall <vze2mhvc@bellatlantic.net>
Message-ID: <3C8A0617.A85860F9@bellatlantic.net>
Source record: 45819

When working with stuff like that, I use an auto paint rated filter mask with two "NIOSH" plug on filters. Like breathing fresh air..

Mike Andrews wrote:

> john walton <jdwalton@comcast.net> wrote:
> : I'm rebuilding the power supply of a GenRad 1933 sound level meter (circa
> : 1977 or thereabouts). A couple diodes in the switcher were shot so I have
> : replaced these. One difficulty which I encountered, however, is the
> : paraffinic or plastic coating GR used to protect the circuitry from the
> : elements and leaky batteries. I used Xylol (which I guess is something like
> : an alcohol cousin of xylene) to dissolve a bit of it (so I could solder in
> : the new diodes.) But I really don't like using these solvents within the
> : enclosed area of my workshop. Anyone know the makeup of the resin which GR
> : used?
>
> Actually, xylene and xylol are the same thing. Don't know anything
> about the conformal coating, but I _do_ know that xylene is a
> carcinogen. and that you might want to use forced ventilation in
> the work area.
>
> --
> [Once in a lifetime opportunity] is simply a veiled reference to the
> staff contract termination procedure, which involves a sunny wall,
> a single cigarette and some middling to average marksmen...
> -- Dan Holdsworth

1928. Re: UHF CB to 70 cm band conversion possible?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-09 13:59:43 UTC
From: Matt <doormattNOSPAM@bigpond.com>
Message-ID: <ruoi8.7960$uR5.8880@newsfeeds.bigpond.com>
Source record: 45820
Cross-posted to: rec.radio.amateur.homebrew,aus.radio.amateur.misc

Definitely wouldn't waste my time with a 472S - I used to own one, and by far it was the deafest UHF CB that I have ever used or owned, and it put me of Electrophone for a long time. There were some mods out that allowed you to put in RX freqs for the cops, but it was even deafer on those freqs - so I reckon it would be damn near impossible to hear another radio from more than a couple of Km away if you put it on 70cm. It truly was a pox radio, and I am glad that I got rid of it - still reckon that if you are keen on the project side of things you should look at shifting commercial radios onto the amateur bands - if you pick a radio that few have done this for, you will have lots of fun and games getting everything up and running.

Have fun

Matt

Michael Bell <michaelb@belfry.cx> wrote in message
news:87zo1iytdu.fsf@belfry.cx...
>
> I asked:
>
> > > I have access to an unused UHF CB transceiver. Is it feasible (or
> > > even practically possible) to convert it for operation on the 70cm
> > > amateur band? Can someone direct me to information on how this
can be
> > > done?
>
> "R1rob" <@> writes:
> > what radio is it??
>
> A GME Electrophone TX472S, the mining industry's staple.
>
> It sounds like doing anything to it isn't worth the effort. The idea
> only occurred to me because it would be an educational project and
> give me something to play with while I'm working on my Morse. At the
> moment my principal interests are building things and HF.
>
> --
> Michael Bell
> Kalgoorlie, Western Australia.
>
> GnuPG fingerprint: E3E4 31C6 6FE6 B4F7 4279 5F48 D417 C044 ECD6 38AB
>
> Remove underwear to reply

1929. WTB: 12 pin Jones connector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-09 14:00:31 UTC
From: k9sqg@aol.com
Message-ID: <20020309090031.17018.00000260@mb-fr.aol.com>
Source record: 45821

Would like to buy two, 12 pin male cable Jones connectors.

Thanks.

Evan

1930. Re: Big cumfy radio tuning knob.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-09 16:38:15 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u8kek09rrlgnc5@corp.supernews.com>
Source record: 45822

Cathryn

By way of a little more detail ... optical encoders come in 2 basic flavors. There are binary/bcd encoders which return a value depending on the knob position, and there are Gray code encoders. The Gray code encoders have a 2 bit output which are essentially out of phase with each other. It turns out that if you have an application like a tuning knob, where you want to increase or decrease some value over multiple turns, the Gray code is a lot more convenient. Not only does it only take 2 input pins on your controller, but the coding is a lot simpler. If the position of the knob matters, then the binary ones are better. With the Gray code, you don't know where the knob is on power up. Encoders are available with as many steps as you want to pay for, but encoders that are intended to have knobs attached (rather than being part of some machine) go up to around 256 steps. Well, Grayhill has a mechanical encoder with a 4 bit gray code output, but it's only 16 steps. For a radio tuning dial, that's not enough.

You may need to try a few to get the right feel. Not all specify the rotational torque, and even when they do, I'm not so sure I can translate that into "feel" without some experimentation. I'm guessing you are going to want to be well below 1 oz-in, but that's just a guess! I see that Bourns has an encoder with a 0.1 oz-in torque, but it costs $30 more than the same encoder with 1.5 oz-in. All the Grayhill models seem to be 1.5 oz-in.

It would be interesting to see your results of talking to Yaecommwood. I, for one, would be willing to invest something in my projects to get that nice feel.

..

"Cathryn Mataga" <cathryn@junglevision.com> wrote in message news:3C89B384.8070007@junglevision.com...
>
> Good idea. I'll call up Icom/Yaesu/Kenwood or somebody like that and see what I can
> come up with. (And, for me, the knob is really almost the whole project, so
> I don't mind dropping a few bucks for the 'optical encoder.')
>
>

1931. Re: generating 19khz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-09 18:27:58 UTC
From: jimbo@123unknown.demon.co.uk
Message-ID: <3c8a53ca.212037@news.demon.co.uk>
Source record: 45824

Thanks all for the replys. I personally like the one about the 455 khz resonator. Interesting. Ive actually managed to find one of these xtals for only 2pound. I wasnt looking in the right places.

Thanks again

On Fri, 08 Mar 2002 17:35:43 GMT, jimbo@123unknown.demon.co.uk (Jimbo) wrote:

>I wonder if someone can help me. Im building a stereo coder which asks
>for a 4864khz xtal. Now these things are hard to find. So, i want to
>generate this 19khz another way. Ive thought about using a cr circuit
>but im not sure if this will be stable enough.
>
>Any ideas?
>
>Thanks
>
>Jimbo

1932. Re: Big cumfy radio tuning knob.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-09 18:30:22 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C8A5562.6F2@pop.removethistomailme.net>
Source record: 45823

Cathryn Mataga wrote:
>
> xpyttl wrote:
> > The "some kind of optical deal" is an optical encoder. They are available
> > at most electronic houses, and for inputting frequency (or whatever) into a
> > PIC or microcontroller of your choice, they are pretty convenient. However,
> > they are a bit pricey - $30-50 or so. Mechanical ones are a lot cheaper
> > ($3-8) but they don't have the nice feel, or the resolution.
> >

Digikey sells a nice line of optical encoders. Next time I need a
tuning knob, though, I'll just run down to Icom's headquarters in
Bellevue, WA and buy one at their parts counter.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1933. Bonex Toko Website Virus??? / coil info request

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-09 19:01:29 UTC
From: m0cem@aol.com
Message-ID: <dca0b959.0203091101.6686ca1c@posting.google.com>
Source record: 45825

The last few times I've tried to access the BEC website, I have had a virus warning (w32nimda). Although I wrote and advised them a couple of weeks ago, the problem was still there when I tried again today. And yes, I had cleared my cache. Anyone else know anything about this? I am using McAffee AV and it is fully up to date.

Does anybody have a cross reference list for the older Toko coil numbers, K1731 and 4921 in particular?

Please don't reply to my email address, it was getting so much spam that I've had to disable all incoming mail.

Best regards,
Dave M0CEM

1934. Re: generating 19khz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-09 19:42:42 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C8A65B2.AABA5E5E@ieee.org>
Source record: 45826

Try building an oscillator from a 38.00053MHz crystal.... Divide it down by 1000 and then by two. With a little filtering, you will have 19kHz sine wave...

The crystal is available from Mouser for $.64.

Clyde
KA1CRV

Jimbo wrote:

> I wonder if someone can help me. Im building a stereo coder which asks
> for a 4864khz xtal. Now these things are hard to find. So, i want to
> generate this 19khz another way. Ive thought about using a cr circuit
> but im not sure if this will be stable enough.
>
> Any ideas?
>
> Thanks
>
> Jimbo

1935. TS440

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-09 21:30:09 UTC
From: Nobody <NotHere@Nowhere.net>
Message-ID: <3C8A7E07.5F7DA2B7@Nowhere.net>
Source record: 45827

Looking for part numbers for male plugs to fit accessory sockets on a Kenwood TS440 Also would like to contact anyone who has trunk mounted a TS440 (or similar)

Thanks

Ted Kester KD4EE
tk1932@speedfactory.net

1936. WTB: Watkins Johnson WJ-8711 Manuals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-09 22:05:31 UTC
From: W3BV <w3bv@arrl.net>
Message-ID: <LGvi8.76$BN2.10970@news2.voicenet.com>
Source record: 45828
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.shortwave,rec.radio.swap

Want to Buy (or need a source for) operator and service manuals for the Watkins Johnson WJ-8711 HF receiver. Any help locating the same greatly appreciated.

Alan, W3BV

1937. Re: Parasitics of SMD resistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-09 22:50:40 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C8A91C0.A0FF3F92@eznec.com>
Source record: 45829

There's nothing about the resistance material that makes it significantly more inductive than a plain piece of metal. So what I do is to model the resistor as a microstrip transmission line of the appropriate length, width, and thickness. If you prefer, and the frequency is low enough that the resistor is only a small part of a wavelength (usually the case), you can replace the transmission line with a pi or L network equivalent. The equivalent L and C depend on what kind of substrate the component is mounted on. For example, an 0603 resistor (or capacitor) mounted on 0.062 FR4 (dielectric constant ~ 5) has a characteristic Z0 of around 83 ohms and a velocity factor of 0.56. You can calculate the L and C per unit length (L' and C') as:

L' = Z0 * VF / c
C' = VF / (Z0 * c)

where VF = the velocity factor, Z0 the characteristic impedance, and c the speed of light. If you know the electrical length of the line in meters, you can calculate L and C as:

L = Z0 * EL / c
C = EL / (Z0 * c)

where EL is the electrical length (physical length * VF) in meters.

Using Z0 = 83 and VF = 0.56, this gives an equivalent L of about 0.24 nH. The same resistor mounted on PTFE (dielectric constant ~ 2.3) makes a transmission line with Z0 = 112 and VF = 0.76, or an equivalent L of 0.44 nH. The shunt C to ground is often significant also, so you should include this in your model if appropriate.

If the component is mounted in any other way than right against the substrate, the inductance will be higher and the capacitance lower.

There are numerous sources where you can find the Z0 and VF or electrical length of microstrip lines.

Roy Lewallen, W7EL

Peter Bolch wrote:
>
> Hi
>
> I have searched the web sites of quite some manufacturers of SMD resistors
> but could not find detailled information about the parasitics of resistors.
>
> In an application note I found that with a 0603 1k resistor there is a 1.7
> nH inductor in series with the resistor.

>
> Can someone here provide more information?
>
> Peter

1938. Re: Battery assisted power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 00:19:12 UTC
From: mcalhoun@ksu.edu
Message-ID: <a6e8q0$a51@unix1.cc.ksu.edu>
Source record: 45830

>I think I'll follow the KISS principle and go for the simplest solution:
>I'll use three 12V 7AH gel batteries in parallel (very economical) and

Do be aware that PARALLELING batteries is not particularly recommended;
if/when a cell in one of them fails, that particular paralleled TEN-volt
battery is going to "drag" the TWELVE-volt battery(ies) down and is
liable to ruin them, too. (Of course, you can parallel them safely by
using several diodes, but that causes you to lose about a volt. I've
long wished that FOURTEEN-volt batteries were commonly available!)

>keep them charged with my old stabilized 3A power supply (wich has reverse
>diodes to protect it from discharging the batteries into the PSU).

Harbor Freight (a mail-order company which has sent me as many a FOUR
DIFFERENT catalogs in TWO dys!) occasionally offers "12-volt battery
maintainers" for $7.49 plus S&H. I think I have SIX of them keeping
batteries charged around the place (tractor, emergency generator,
hamshack, electric fence, and several spare batteries). I recall they
are rated for only about half an amp, but compared to a $24 version from
WalMart which is good for 1.5 amps, they are well worth their cost!

Incidentally, I've run my entire hamshack for some twenty YEARS using
so-called "starting" automotive batteries without any difficulties at
all. I'm not a heavy operator, but the "juice" used by an hour of
100-watt HF operation is easily replaced by my trickle/float charger
between operating sessions.

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

1939. Re: Big cumfy radio tuning knob.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 01:34:17 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <a6ed6l$pd4$1@nntp9.atl.mindspring.net>
Source record: 45831

FYI:

There is an interesting project described in detail in this month's QEX magazine from ARRL on optical encoded rotary knobs.

--Peter K1PO

"xpyttl" <xpyttl_nospam@earthling.net> wrote in message news:u8kek09rrlgnc5@corp.supernews.com...
> Cathryn
>
> By way of a little more detail ... optical encoders come in 2 basic flavors.
> There are binary/bcd encoders which return a value depending on the knob
> position, and there are Gray code encoders. The Gray code encoders have a 2
> bit output which are essentially out of phase with each other. It turns out
> that if you have an application like a tuning knob, where you want to
> increase or decrease some value over multiple turns, the Gray code is a lot
> more convenient. Not only does it only take 2 input pins on your
> controller, but the coding is a lot simpler. If the position of the knob
> matters, then the binary ones are better. With the Gray code, you don't
> know where the knob is on power up. Encoders are available with as many
> steps as you want to pay for, but encoders that are intended to have knobs
> attached (rather than being part of some machine) go up to around 256 steps.
> Well, Grayhill has a mechanical encoder with a 4 bit gray code output, but
> it's only 16 steps. For a radio tuning dial, that's not enough.
>
> You may need to try a few to get the right feel. Not all specify the
> rotational torque, and even when they do, I'm not so sure I can translate
> that into "feel" without some experimentation. I'm guessing you are going
> to want to be well below 1 oz-in, but that's just a guess! I see that
> Bourns has an encoder with a 0.1 oz-in torque, but it costs $30 more than
> the same encoder with 1.5 oz-in. All the Grayhill models seem to be 1.5
> oz-in.
>
> It would be interesting to see your results of talking to Yaecommwood. I,
> for one, would be willing to invest something in my projects to get that
> nice feel.
>
> ..
>

> "Cathryn Mataga" <cathryn@junglevision.com> wrote in message
> news:3C89B384.8070007@junglevision.com...
> >
> > Good idea. I'll call up Icom/Yaesu/Kenwood or somebody like that and
see
> what I can
> > come up with. (And, for me, the knob is really almost the whole
project,
> so
> > I don't mind dropping a few bucks for the 'optical encoder.')
> >
> >
>
>

1940. Re: TS440

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 02:12:30 UTC
From: "John D. Farr" <jfarr62@comcast.net>
Message-ID: <iizi8.164675$pN4.8719307@bin8.nnrp.aus1.giganews.com>
Source record: 45832

Two of those are standard "din" connectors and are available from Mouser,
Digikey, and probably RadioShack. The 13 pin plug is harder to find. They
are available at most hamfests. Surplus sales of Nebraska also has them.
John
"Nobody" <NotHere@Nowhere.net> wrote in message
news:3C8A7E07.5F7DA2B7@Nowhere.net...
> Looking for part numbers for male plugs to fit accessory sockets on a
> Kenwood TS440 Also would like to contact anyone who has trunk mounted a
> TS440 (or similar)
>
> Thanks
>
> Ted Kester KD4EE
> tk1932@speedfactory.net
>
>

1941. need nov 2000 qst artical

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 02:26:13 UTC
From: Steve Wells <Swells244@insightbb.com>
Message-ID: <9vzi8.11787$ZR2.6847@rwcrnsc52.ops.asp.att.net>
Source record: 45833

I need the artical on the digital interface including the parts list.If someone can scan it or Ill pay for coping and mailing.
Thanks
Steve KG4JNL

1942. Re: J-pole query, with a diference

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 03:16:10 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <8eAi8.12279$vU.293735552@news.inreach.com>
Source record: 45834

Mike:

Yes, you can do it that way, and in fact there was a J in QST some months ago that did that. I am not sure why you would want to though.

73,

Roger K6XQ

1943. Re: need nov 2000 qst artical

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 04:00:44 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <MTAi8.165799$pN4.8818302@bin8.nnrp.aus1.giganews.com>
Source record: 45835

I have two suggestions:
1) learn to spell
2) become a member of the ARRL
sincerely

"Steve Wells" <Swells244@insightbb.com> wrote in message
news:9vzi8.11787$ZR2.6847@rwcrnsc52.ops.asp.att.net...
> I need the artical on the digital interface including the parts list.If
> someone can scan it or Ill pay for coping and mailing.
> Thanks
> Steve KG4JNL
>
>
>

1944. Re: Watkins Johnson WJ-8711 Manuals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 05:37:52 UTC
From: Richard Burwell <rburwell@bright.net>
Message-ID: <DICi8.1626$0e1.321105@cletus.bright.net>
Source record: 45837
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.shortwave,rec.radio.swap

Try Fair Radio Sales in Lima Ohio http://www.fairradio.com I live 20 miles away from these guys. They deal in used Watkins-Johnson receivers. :)

1945. Russian GI7B tubes $20.00 shipped

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 07:17:26 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <u8lmq0nrisoh9b@corp.supernews.com>
Source record: 45836
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

I have several extra or these. They are N.O.S. Russian GI7B
triodes. Good to 23cm with 350watt dissapation. I am saving
a few for myself but have too many. All are in original packing
containers.

$20.00 each shipped to CONUS.

Doug N4IJ

1946. Re: J-pole query, with a diference

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 09:07:21 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c8b1e63.219354@news.freeserve.net>
Source record: 45838

On Sat, 9 Mar 2002 19:16:10 -0800, "Roger Leone" <arleone@inreach.com>
wrote:

>Mike:
>
>Yes, you can do it that way, and in fact there was a J in QST some months
>ago that did that. I am not sure why you would want to though.
>
>73,
>
>Roger K6XQ
>
Thankyou Roger, I want to, because its for a mobile aerial that has to
be above the roof line of a trailer, the mast, which is bolted to the
trailer hook, gets a 1/4wave whip in its end-cap with the coax fed up
the middle of the mast - a requirement for security of the coax - ,
the lower 1/4wave and stub isolate the rest of the mast making the
1/4wave plus mast into a verticle 1/2wave with no groundplanes - a
requirement for safety .
A transformer fed endfed 1/2 wave or 5/8 wave is mechanically less
robust, AFIK needs a groundplane and at the height it will need to be
at liable to destruction on low flying trees.
I was concidering a Ringo Ranger type arrangement, but I can't find
any dimentional details on the web.
I hope this explains my reasoning.
atb Mike W

1947. IC-751A for QRP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 10:56:30 UTC
From: Esa Tikkurila <etikku@hotmail.com>
Message-ID: <yZGi8.68$fb7.6646@read2.inet.fi>
Source record: 45839

Hi,

I have ICOM IC-751A HF rig. I have planned to use it like a qrp rig so that I take TX-signal out from transverter jack to the external amplifier. But what is right way to make the connections? How about this:

- From transverter jack connection to ext. amplifier.
- +8 volts to pin 11 in accessory socket to disable HF finals
- Received signal to receiver input jack from external antenna switch, wich is controlled by signal from T/R control jack.

1948. Re: IC-751A for QRP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 11:07:37 UTC
From: Esa Tikkurila <etikku@hotmail.com>
Message-ID: <Z7Hi8.71$fb7.6902@read2.inet.fi>
Source record: 45840

Or is the using of external ALC jack to drop output power the best way?
Purpose is to use only CW mode.

Esa Tikkurila wrote in message ...
>Hi,
>
>I have ICOM IC-751A HF rig. I have planned to use it like a qrp rig so that
>I take TX-signal out from transverter jack to the external amplifier. But
>what is right way to make the connections? How about this:
>
>- From transverter jack connection to ext. amplifier.
>- +8 volts to pin 11 in accessory socket to disable HF finals
>- Received signal to receiver input jack from external antenna switch, wich
>is controlled by signal from T/R control jack.
>

1949. Re: TS440

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 11:20:20 UTC
From: Nobody <NotHere@Nowhere.net>
Message-ID: <3C8B40FF.A1DA315A@Nowhere.net>
Source record: 45841

Jim & John

Thanks for your quick replies ..... I searched DigiKeys' On Line catalog
but got mucho hits. I have a TS440 that I am planning to control from the
front seat with a
homebrew control head built around a PIC microcontroller. Any ideas, hints,
comments or references would be appreciated.

Thanks

Ted KD4EE

Jim Higgins wrote:

> On Sat, 09 Mar 2002 21:30:09 GMT, in
> <3C8A7E07.5F7DA2B7@Nowhere.net>, Nobody <NotHere@Nowhere.net>
> wrote:
>
> >Looking for part numbers for male plugs to fit accessory sockets on a
> >Kenwood TS440 Also would like to contact anyone who has trunk mounted a
> >TS440 (or similar)
> >
> >Ted Kester KD4EE
> >tk1932@speedfactory.net
>
> Following part numbers are in Digikey Catalog
> http://www.digikey.com
>
> The Mike Plug is a 8-pin DIN, P/N CP-1080-ND
> Also at Radio Shack. You might find 6 and 7-pin DIN there also.
>
> Accessory Jack 1 is a 6-pin DIN, P/N CP-1060-ND
>
> Accessory Jack 2 is a 13-pin DIN, P/N CP-1013-ND
>
> Remote Connector is a 7-pin DIN, P/N CP-1070-ND
>
> AFSK in/out & Accessory 3 take an RCA plug, Get a handful at
> Radio Shack
>
> --
> Jim Higgins, quasimodo AT yahoo DOT com
> icbm: 33.55.34N, 80.24.21W

1950. RE:CMOS switches and RF/mixers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 13:45:03 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c8bf41e$0$14978@echo-01.iinet.net.au>
Source record: 45705

Looks like the new bus switch series devices would do well
Has anyone tried the TinyLogic series eg Fairchild
NC7SB3157 SPDT switch?
I am thinking this could be used in a balanced mixer - due to the double
throw action it would be inherently balanced
Could two of these look like a diode ring mixer?

Richard

1951. CMOS switches and RF/mixers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 13:46:54 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c8bf41f$0$14978@echo-01.iinet.net.au>
Source record: 45704

Looks like the new bus switch series devices would do well
Has anyone tried the TinyLogic series eg Fairchild
NC7SB3157 SPDT switch?
I am thinking this could be used in a balanced mixer - due to the double
throw action it would be inherently balanced
Could two of these look like a diode ring mixer?

Richard

1952. Re: need nov 2000 qst artical

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 13:50:27 UTC
From: Steve Wells <Swells244@insightbb.com>
Message-ID: <CwJi8.11916$702.10159@sccrnsc02>
Source record: 45842

You know when I checked what I had sent and seen my mistake ,I knew some smart#$% would make a comment.I bet you wonder why the ham population is declining.Its people with attitudes like yours.What ever happened tp helping others and community spirit.Just my opinion.By the way I do belong to the ARRL.
"john walton" <jdwalton@comcast.net> wrote in message news:MTAi8.165799$pN4.8818302@bin8.nnrp.aus1.giganews.com...
> I have two suggestions:
> 1) learn to spell
> 2) become a member of the ARRL
> sincerely
>
>
> "Steve Wells" <Swells244@insightbb.com> wrote in message
> news:9vzi8.11787$ZR2.6847@rwcrnsc52.ops.asp.att.net...
> > I need the artical on the digital interface including the parts list.If
> > someone can scan it or Ill pay for coping and mailing.
> > Thanks
> > Steve KG4JNL
> >
> >
> >
>
>

1953. FT: 8950 Finals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 17:46:28 UTC
From: ldaniel102@aol.com
Message-ID: <20020310124628.04692.00000561@mb-fk.aol.com>
Source record: 45843

For trade a nice pair of new/nearly new 8950 for audio types (7027, 8417, 7868 etc.) Get them while you still can. Thanks Larry

1954. Re: UHF CB to 70 cm band conversion possible?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 19:44:15 UTC
From: RaOuL <russ@bit-net.nospam.com>
Message-ID: <FIOi8.532$_T4.5054@news.bit-net.com>
Source record: 45844
Cross-posted to: rec.radio.amateur.homebrew,aus.radio.amateur.misc

...or I could sell him one of my spare radios - I've been looking for a good home for my Radio Shack HTX 400 70cm handheld. Details are on my webpage - http://www.bit-net.com/~russ/htx400.html

73,
RaOuL

"Matt" <doormattNOSPAM@bigpond.com> wrote in message news:faYh8.7086$uR5.5778@newsfeeds.bigpond.com...
> It could likely be done, but I personally would not bother. It would
> likely be a reasonably expensive job, and wouldn't provide particularly
> good results - would be a low powered and not terribly useful piece of
> gear, and likely the sensitivity would be pretty average. Having said
> that, if you want to try the conversion game, you would be better off
> converting a commercial radio onto 70cm - good receivers, around 35
> watts, and many more channels are possible (a Sawtron KG107 - or 109 -
> cannot remember) can (I think) have up to 16 banks of 100 channels which
> is more than you need, but much better than only 40 channels. Just make
> sure that you get a version that is capable of being reset for 70cm.
> Alternatively you could always just buy one - AWA RT85 radios set on
> 70cm were going for $50-70 only a couple of weeks ago - all are
> aparently sold out now, but keep your eyes and ears open, and you might
> be lucky.
>
>
>
>
> Matt
>
>
> Michael Bell <michaelunderwear@belfry.cx> wrote in message
> news:63926e6f.0203072106.2962ca06@posting.google.com...
> > I have access to an unused UHF CB transceiver. Is it feasible (or
> > even practically possible) to convert it for operation on the 70cm
> > amateur band? Can someone direct me to information on how this can be
> > done?
> >
> > I've searched at some obvious places but haven't found anything other
> > than an implication that the conversion can be done, but not any
> > how-tos.
> >
> > (No, I don't have a licence;
> > yes, I am preparing for the exams;
> > no, I have no intention of operating illegally...)

> >
> > Thanks,
> > Michael.
> >
> > (To email simply remove underwear)
> > _
>
>

1955. FA TS-850S Kenwood Final Amplifier Complete Unit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 20:14:13 UTC
From: n6ax@arrl.net
Message-ID: <cd5f86bb.0203101214.584c089@posting.google.com>
Source record: 45845
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Complete, working power amplifier unit from Kenwood TS-850S, 100 watt HF amplifier including the cast housing!

See it and bid on it at:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1337995375

Thanks

John

1956. Re: need nov 2000 qst artical

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 20:35:26 UTC
From: Gary McAdams <g.m.mcadams@worldnet.att.net>
Message-ID: <isPi8.1558$tP2.164345@bgtnsc05-news.ops.worldnet.att.net>
Source record: 45846

"Steve Wells" <Swells244@insightbb.com> wrote in message
news:CwJi8.11916$702.10159@sccrnsc02...
> You know when I checked what I had sent and seen my mistake ,I knew some
> smart#$% would make a comment.

Steve,

Know what you mean, but I believe that if
you go to the ARRL web site, you can
request reprints of articles from QST.

I don't know if you need to be a member
of the league to request re-prints or not.

Good luck on your quest, and ignore the
buttheads. For some reason, our
hobby attracts more than our share
of humanities misfits.

73, Gary WG7X

1957. WTB Miller Parts For Receiver Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 21:37:50 UTC
From: Byron Tatum <bjtatum@ev1.net>
Message-ID: <3c8bd9ec$1_1@newsa.ev1.net>
Source record: 45699

Hello- I am looking for these JW Miller parts for a receiver project :
B-727 RF Coils, B-727C RF coils, S-27 Shields, 912-C2, 912-C4, 912-C5.
Also, National XR-50 1/2" slug tuned coil forms.Thanks! WA5THJ,
281-331-1899.

1958. TS950S service manual needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 21:39:02 UTC
From: Xu <salers@hamal.freemail.ne.jp>
Message-ID: <a6gjrk$pr0$1@mail.cn99.com>
Source record: 45697

Hi!
I have got a TS950S, would like trad for a TS950S service manual.
I have TS450S/690S ,TS930S,TS940S service manual.
73! Xu

1959. TS950 VFD display unitneeded

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 21:51:02 UTC
From: Xu <salers@hamal.freemail.ne.jp>
Message-ID: <a6gki9$q8t$1@mail.cn99.com>
Source record: 45698

Which guy have a dead TS950?
I want to buy a TS950 VFD display unit.
73! Xu

1960. Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 23:10:10 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u8npuk77l2fuf5@corp.supernews.com>
Source record: 45700
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

There is a rather unique aviation navigation signal (localizer and glide-slope) that utilizes AM modulation. At dead-center on either the runway centerline (localizer) and on the correct angle down to the runway (glideslope) there are two low audio tones that are equal. The tones are 90 and 150 Hz. As you drift away from centerline one way (or drift away from the glide path) one tone or the other will predominate, depending on which way you are drifting. Rectifying these two signals and driving a left-right meter (localizer) or up-down meter (glideslope) lets the pilot literally "fly the beam" down to near the ground.

The classic way of doing this is by having two independent receivers, two detectors, and two meters. The localizer frequencies are between 108.1 and 111.9 MHz., and they are "paired" with glideslope carrier frequencies in the 330 MHz. area. That is, for a given localizer frequency, there is a predetermined glideslope frequency.

Since things on an instrument approach happen somewhat slowly, it seems to me that a single receiver that was timeshared for (say) a second on the localizer and then a second on the glideslope, back and forth, would save well over half the complexity of the design. Not only that, but since the AM tones are the same for both localizer and glideslope, it also seems like a relatively simple sample-and-hold would work to let us use one set of filters/detectors to do the amplitude comparison. Two "meters" of course (LED lights work well) but a single receiver chain.

Here are some random thoughts...if anybody else cares to weigh in with some others, I'd appreciate it.

1. The receiver can use the same local oscillator if the first IF is high enough. If we postulate, for example, a 70 MHz. LO, the VCO only has to swing from 178 to 260 MHz. That's wide, but certainly doable. Then the synthesizer can be switched in a few milliseconds from one frequency to the other.

2. The AGC is going to be an interesting challenge, in that it will have to be a relatively long time constant so as not to lose the fairly low audio frequencies, yet fast enough to settle within our one second time sample.

3. The chips that were available the last time I did an AM design are no longer around. If anybody knows of an AM chip that will work up at 70+ MHz. as the IF strip, I'd sure like to know about it.

Thoughts appreciated.

Jim

1961. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-10 23:38:50 UTC
From: red rover <natpress@sympatico.ca>
Message-ID: <Q7Si8.130387$JZ.15922500@news20.bellglobal.com>
Source record: 45701
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

I'm not quite clear.

Are there 2 tones for Glide and 2 tones for
centerline or 1 tone for each?

I think it would be a very suitable for a DDS with
DSP. Most DDS's have at least 2 frequency registers
so you could switch frequencies instantly for the mixer
and then run an FFT or DFT with the DSP to pick out the
tones and their amplitudes.

Steve

Jim Weir wrote in message ...
>There is a rather unique aviation navigation signal (localizer and
>glide-slope) that utilizes AM modulation. At dead-center on either the
>runway centerline (localizer) and on the correct angle down to the runway
>(glideslope) there are two low audio tones that are equal. The tones are
90
>and 150 Hz. As you drift away from centerline one way (or drift away from
>the glide path) one tone or the other will predominate, depending on which
>way you are drifting. Rectifying these two signals and driving a
left-right
>meter (localizer) or up-down meter (glideslope) lets the pilot literally
>"fly the beam" down to near the ground.
>
>The classic way of doing this is by having two independent receivers, two
>detectors, and two meters. The localizer frequencies are between 108.1 and
>111.9 MHz., and they are "paired" with glideslope carrier frequencies in
the
>330 MHz. area. That is, for a given localizer frequency, there is a
>predetermined glideslope frequency.
>
>Since things on an instrument approach happen somewhat slowly, it seems to
>me that a single receiver that was timeshared for (say) a second on the
>localizer and then a second on the glideslope, back and forth, would save
>well over half the complexity of the design. Not only that, but since the
>AM tones are the same for both localizer and glideslope, it also seems like
>a relatively simple sample-and-hold would work to let us use one set of
>filters/detectors to do the amplitude comparison. Two "meters" of course
>(LED lights work well) but a single receiver chain.
>
>Here are some random thoughts...if anybody else cares to weigh in with some
>others, I'd appreciate it.

>
>1. The receiver can use the same local oscillator if the first IF is high
>enough. If we postulate, for example, a 70 MHz. LO, the VCO only has to
>swing from 178 to 260 MHz. That's wide, but certainly doable. Then the
>synthesizer can be switched in a few milliseconds from one frequency to the
>other.
>
>2. The AGC is going to be an interesting challenge, in that it will have
to
>be a relatively long time constant so as not to lose the fairly low audio
>frequencies, yet fast enough to settle within our one second time sample.
>
>3. The chips that were available the last time I did an AM design are no
>longer around. If anybody knows of an AM chip that will work up at 70+
>MHz. as the IF strip, I'd sure like to know about it.
>
>Thoughts appreciated.
>
>Jim
>
>
>

1962. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 00:00:46 UTC
From: flyer <glasair@cox.net>
Message-ID: <OsSi8.14067$5S6.633612@news2.west.cox.net>
Source record: 45702
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

In fact, the Narco NAV-122 receiver, which has been around longer than
the dirt behind my instrument panel, is a time-shared LOC-GS receiver.
If you pull out the IDENT knob to engage the ident audio filter, the
GS needle drifts up and parks at the top of the dial, and the GS flag
comes back into view, warning you that GS navigation is not available.
They beat you to it. This is described in the installation and the users
manual.
"Jim Weir" <jim@rst-engr.com> wrote in message
news:u8npuk77l2fuf5@corp.supernews.com...
> There is a rather unique aviation navigation signal (localizer and
> glide-slope) that utilizes AM modulation. At dead-center on either the
> runway centerline (localizer) and on the correct angle down to the runway
> (glideslope) there are two low audio tones that are equal. The tones are
90
> and 150 Hz. As you drift away from centerline one way (or drift away from
> the glide path) one tone or the other will predominate, depending on which
> way you are drifting. Rectifying these two signals and driving a
left-right
> meter (localizer) or up-down meter (glideslope) lets the pilot literally
> "fly the beam" down to near the ground.
>
> The classic way of doing this is by having two independent receivers, two
> detectors, and two meters. The localizer frequencies are between 108.1
and
> 111.9 MHz., and they are "paired" with glideslope carrier frequencies in
the
> 330 MHz. area. That is, for a given localizer frequency, there is a
> predetermined glideslope frequency.
>
> Since things on an instrument approach happen somewhat slowly, it seems to
> me that a single receiver that was timeshared for (say) a second on the
> localizer and then a second on the glideslope, back and forth, would save
> well over half the complexity of the design. Not only that, but since the
> AM tones are the same for both localizer and glideslope, it also seems
like
> a relatively simple sample-and-hold would work to let us use one set of
> filters/detectors to do the amplitude comparison. Two "meters" of course
> (LED lights work well) but a single receiver chain.
>
> Here are some random thoughts...if anybody else cares to weigh in with
some
> others, I'd appreciate it.
>

> 1. The receiver can use the same local oscillator if the first IF is high
> enough. If we postulate, for example, a 70 MHz. LO, the VCO only has to
> swing from 178 to 260 MHz. That's wide, but certainly doable. Then the
> synthesizer can be switched in a few milliseconds from one frequency to
the
> other.
>
> 2. The AGC is going to be an interesting challenge, in that it will have
to
> be a relatively long time constant so as not to lose the fairly low audio
> frequencies, yet fast enough to settle within our one second time sample.
>
> 3. The chips that were available the last time I did an AM design are no
> longer around. If anybody knows of an AM chip that will work up at 70+
> MHz. as the IF strip, I'd sure like to know about it.
>
> Thoughts appreciated.
>
> Jim
>
>
>

1963. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 00:07:43 UTC
From: John Larkin <jjlarkin@highlandSNIPTHISTechnology.com>
Message-ID: <V=SLPArj+odZwRgoa8f=DkgNZ5GA@4ax.com>
Source record: 45703
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

On Sun, 10 Mar 2002 18:38:50 -0500, "red rover"
<natpress@sympatico.ca> wrote:

>I'm not quite clear.
>
>Are there 2 tones for Glide and 2 tones for
>centerline or 1 tone for each?
>
>I think it would be a very suitable for a DDS with
>DSP. Most DDS's have at least 2 frequency registers
>so you could switch frequencies instantly for the mixer
>and then run an FFT or DFT with the DSP to pick out the
>tones and their amplitudes.
>
>Steve

Yeah: sounds like switched front-end bp filters, DDS LO, direct IF
sub-Nyquist digitizing, DSP from then on. Very few chips and tons of
code.

John

1964. Swiching RF with CMOS/mixers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 00:08:07 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c8bf41f$1$14978@echo-01.iinet.net.au>
Source record: 45706

Has anyone tried using the new TinyLogic switches in a mixer? eg the
Fairchild
NC7SB3157 SPDT switch?
I am thinking this could be used in a balanced mixer - due to the double
throw action it would be inherently balanced
Could two of these look like a diode ring mixer?

Richard

1965. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 00:24:46 UTC
From: red rover <natpress@sympatico.ca>
Message-ID: <0PSi8.130799$JZ.15942851@news20.bellglobal.com>
Source record: 45707
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

Not so much code is there?

Steve

John Larkin wrote in message ...
>On Sun, 10 Mar 2002 18:38:50 -0500, "red rover"
><natpress@sympatico.ca> wrote:
>
>>I'm not quite clear.
>>
>>Are there 2 tones for Glide and 2 tones for
>>centerline or 1 tone for each?
>>
>>I think it would be a very suitable for a DDS with
>>DSP. Most DDS's have at least 2 frequency registers
>>so you could switch frequencies instantly for the mixer
>>and then run an FFT or DFT with the DSP to pick out the
>>tones and their amplitudes.
>>
>>Steve
>
>
>Yeah: sounds like switched front-end bp filters, DDS LO, direct IF
>sub-Nyquist digitizing, DSP from then on. Very few chips and tons of
>code.
>
>John
>

1966. FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 00:54:25 UTC
From: Lou <tech@dp.net>
Message-ID: <a6h0pd$26jt$1@news.dp.net>
Source record: 45708

Lots of stuff good for homebrew. Need something, ask. Trying to clear out
lots of stuff. Way too much to list.

--
Lou
Owner of: C.L. FURLONG ENTERPRISES

Home of "Gifts and More" & "Electronics Plus"

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E-Mail: Tech@DP.NET
Hours: M-F 9-5 - S/S by appt.
Closed on Holidays

1967. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 01:43:50 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u8o37cfv0lkle5@corp.supernews.com>
Source record: 45709
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

"flyer" <glasair@cox.net> wrote in message
news:OsSi8.14067$5S6.633612@news2.west.cox.net...

> In fact, the Narco NAV-122 receiver, which has been around longer than
> the dirt behind my instrument panel, is a time-shared LOC-GS receiver.

Is there any published or unpublished design information on what time slices they took? Or what the frequency scheme was?

One thought that came to mind after I scribbled what I did this afternoon was to actually make the localizer receiver the IF strip for the glideslope. Since the pairing of the loc-gs frequencies does not appear to have rhyme nor reason, the lookup table can as easily be programmed to take into account a wandering IF frequency somewhere from 108 to 112.

The problem, then, is one of switching the antenna from one port to another. Since a quarter-wave at LOC is a three-quarter wave at GS, the same antenna will serve nicely for both.

> If you pull out the IDENT knob to engage the ident audio filter, the
> GS needle drifts up and parks at the top of the dial, and the GS flag
> comes back into view, warning you that GS navigation is not available.
> They beat you to it. This is described in the installation and the users
> manual.

Does the installation manual go into any details? I never have been one to reinvent the wheel when a bit of hard-won information is at hand.

Jim

1968. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 01:48:29 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u8o37dfplk53e6@corp.supernews.com>
Source record: 45710
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

"flyer" <glasair@cox.net> wrote in message
news:OsSi8.14067$5S6.633612@news2.west.cox.net...
> In fact, the Narco NAV-122 receiver, which has been around longer than
> the dirt behind my instrument panel, is a time-shared LOC-GS receiver.

Do you have any technical details of the 122? Time slice? Frequency
scheme?

One thought that came to mind after I posted this afternoon was that the LOC receiver could easily serve as the IF receiver for GS. Since the localizer-gs pairing is about as random as you can get, I'm going to have to use a lookup table to program the synthesizer anyway. Nothing prohibits me from following a wandering IF frequency from 108 to 112. I don't know if Narkie did it that way, but it seems like it is worth investigating.

One problem doing it this way is that the antenna is going to have to be switched from the LOC input to the GS input during GS measurements. Since the antenna is quarter-wave at LOC and 3/4 wave at GS, you can use the same antenna for both.

> If you pull out the IDENT knob to engage the ident audio filter, the
> GS needle drifts up and parks at the top of the dial, and the GS flag
> comes back into view, warning you that GS navigation is not available.
> They beat you to it. This is described in the installation and the users
> manual.

Any more technical information in the manuals that you'd care to share?

Jim

1969. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 01:58:05 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u8o3p9a03qg9c1@corp.supernews.com>
Source record: 45712
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

"red rover" <natpress@sympatico.ca> wrote in message
news:Q7Si8.130387$JZ.15922500@news20.bellglobal.com...

> I'm not quite clear.

Neither am I. I'm sort of pink on the outside and red on the inside.

>
> Are there 2 tones for Glide and 2 tones for
> centerline or 1 tone for each?

Take a frequency between 108 and 112 MHz.. Generate 10 watts of it. Split it into two parts. Modulate one of the parts with 90 Hz. and the other part with 150 Hz.. Send each of the parts to their own moderately directional antennas which are pointed (respectively) 10° right and 10° left of the runway centerline. If you are down the centerline, you receive equal parts of 90 and 150 Hz.. However, as you drift right or left, you move more into the center beam of one of the antennas, and the decoded signal has proportionally more 90 or 150, depending on HOW far you are off, and in which direction.

Now, take another frequency between 325 and 340 MHz. and do the same thing, only this time orient the antennas so that the beams are pointed UP at about a 3° angle instead of sideways. Now if you are too high you get too much of one tone, and low you get too much of the other.

>
> I think it would be a very suitable for a DDS with
> DSP. Most DDS's have at least 2 frequency registers
> so you could switch frequencies instantly for the mixer
> and then run an FFT or DFT with the DSP to pick out the
> tones and their amplitudes.

That seems like a lot of work instead of a PIC for the synthesizer and an opamp analog filter. This technology was invented in the 1940s and isn't sophisticated enough to go to all this trouble. However, I'm willing to learn. Wanna explain a bit how each of these would lend themselves to the design easier than doing it analog?

Jim

1970. Wanted: Heavy Duty 6 position Band Switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 01:59:01 UTC
From: RalphE <k4ffa@comcast.net>
Message-ID: <FbUi8.178119$pN4.9880554@bin8.nnrp.aus1.giganews.com>
Source record: 45711

I am looking fora heavy duty band switch to use in a homebrew amplifer. At least 2 wafers or more.

Or please point me in right direction. Please respond to me directly. kb4i@comcast.net

Thanks,

Phillip KB4I

1971. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 01:59:53 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u8o3srk2b2ncf0@corp.supernews.com>
Source record: 45713
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

Sorry for the duplicate post. My ISP did a disconnect during transmit and I didn't know the send had been made.

Jim

1972. Re: J-pole query, with a diference

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 04:16:42 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0203102016.28d5ba74@posting.google.com>
Source record: 45714

mike@corn2.freeserve.co.uk (Mike W) wrote in message
> I was concidering a Ringo Ranger type arrangement, but I can't find
> any dimentional details on the web.
> I hope this explains my reasoning.
> atb Mike W

They have PDF files of the ringo/ringo ranger and most other cushcraft antennas on their website. Myself, I usually base feed 1/2 waves the same way they do using a gamma loop feed. MK

1973. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 04:37:34 UTC
From: red rover <natpress@sympatico.ca>
Message-ID: <YwWi8.10323$Yg2.679669@news20.bellglobal.com>
Source record: 45715
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

Well a DDS like the ADI AD98xx series could be

http://www.analog.com/productSelection/pdf/ad9830.pdf

be a digitally programmable mixer letting you precisely
pick the frequency in 108-112 MHz range or the
325- 340 MHz range with great precision.

Now you can mix this down to DC or use another DSP
trick of sub-sampling which John refered to as
"direct IF sub-Nyquist digitizing". In this case you use the
ADC as another mixer. You sample the IF at a sub-Nyquist
frequency so low that the IF gets aliased down to DC. This
avoids many problems of more mixing stages and has
become a very common technique.

Now aliasing used to be viewed as a bad thing because it
was viewed as mixing higher frequency noise on top of your
signal. But if the only signal of interest is the higher frequency
then you can use it as a mixer. But now you have to worry
not only about frequencies above the signal aliasing in but
also the frequencies below that you are going to alias on top
of (the lower frequecies). So instead of a low pass filter
you use a bandpass filter centred around the frequencies of interest.

Now, after mixing down you could look for the 90Hz and 150Hz using
an FFT. An example would be running a 64 point FFT with a bandwidth
of 240Hz. You sample at 480Hz (twice the highest frequency) and then
every bin (frequency) is 3.75Hz apart. The 24th frequency is exactly 90Hz
and the 40th is exactly 150Hz.

To simplify the analog bandpass filter you could oversample with the A/D
and use a digital filter to filter.

The name of the game is trade off the precision caps/resistors (which never
really drop in price much) and have accuracy in the 1, 2 and 5% ranges for
digital processing (which continuosly gets cheaper and better). The
precision of the circuit is dictated by the oscillator (parts per million
accuracy)
and the number of bits you specify. Compared to the analog solution the
unit to unit variation is incredibly tight and doesn't really vary with age
or temperature.

Many DSP's have almost all the functions you need built-in. They have ADCs,
DACs,
GPIO etc. It could do the FFT, the AGC, drive your audio out, do the tuning,

drive
the display etc.

Steve

Jim Weir wrote in message ...
>
>"red rover" <natpress@sympatico.ca> wrote in message
>news:Q7Si8.130387$JZ.15922500@news20.bellglobal.com...
>
>> I'm not quite clear.
>
>Neither am I. I'm sort of pink on the outside and red on the inside.
>
>>
>> Are there 2 tones for Glide and 2 tones for
>> centerline or 1 tone for each?
>
>Take a frequency between 108 and 112 MHz.. Generate 10 watts of it. Split
>it into two parts. Modulate one of the parts with 90 Hz. and the other
part
>with 150 Hz.. Send each of the parts to their own moderately directional
>antennas which are pointed (respectively) 10° right and 10° left of the
>runway centerline. If you are down the centerline, you receive equal parts
>of 90 and 150 Hz.. However, as you drift right or left, you move more into
>the center beam of one of the antennas, and the decoded signal has
>proportionally more 90 or 150, depending on HOW far you are off, and in
>which direction.
>
>Now, take another frequency between 325 and 340 MHz. and do the same thing,
>only this time orient the antennas so that the beams are pointed UP at
about
>a 3° angle instead of sideways. Now if you are too high you get too much
of
>one tone, and low you get too much of the other.
>
>
>>
>> I think it would be a very suitable for a DDS with
>> DSP. Most DDS's have at least 2 frequency registers
>> so you could switch frequencies instantly for the mixer
>> and then run an FFT or DFT with the DSP to pick out the
>> tones and their amplitudes.
>
>That seems like a lot of work instead of a PIC for the synthesizer and an
>opamp analog filter. This technology was invented in the 1940s and isn't
>sophisticated enough to go to all this trouble. However, I'm willing to
>learn. Wanna explain a bit how each of these would lend themselves to the
>design easier than doing it analog?
>

>Jim
>
>
>
>

1974. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 05:17:39 UTC
From: berdpee@ami.com.au
Message-ID: <3c8c3cc2.24650325@news.ami.com.au>
Source record: 45716
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

In the MK-7 radar [ALL VALVES] we had a procedure whereby we were able
to stay locked on a target. It was a sort of multiplexed lobe
switching arrangement. It would appear that with todays technology a
lobe switching receiver would easily provide both azimuth and
elevation corrections NO PROBLEM.

On Sun, 10 Mar 2002 15:10:10 -0800, "Jim Weir" <jim@rst-engr.com>
wrote:

>There is a rather unique aviation navigation signal (localizer and
>glide-slope) that utilizes AM modulation. At dead-center on either the
>runway centerline (localizer) and on the correct angle down to the runway
>(glideslope) there are two low audio tones that are equal. The tones are 90
>and 150 Hz. As you drift away from centerline one way (or drift away from
>the glide path) one tone or the other will predominate, depending on which
>way you are drifting. Rectifying these two signals and driving a left-right
>meter (localizer) or up-down meter (glideslope) lets the pilot literally
>"fly the beam" down to near the ground.
>
>The classic way of doing this is by having two independent receivers, two
>detectors, and two meters. The localizer frequencies are between 108.1 and
>111.9 MHz., and they are "paired" with glideslope carrier frequencies in the
>330 MHz. area. That is, for a given localizer frequency, there is a
>predetermined glideslope frequency.
>
>Since things on an instrument approach happen somewhat slowly, it seems to
>me that a single receiver that was timeshared for (say) a second on the
>localizer and then a second on the glideslope, back and forth, would save
>well over half the complexity of the design. Not only that, but since the
>AM tones are the same for both localizer and glideslope, it also seems like
>a relatively simple sample-and-hold would work to let us use one set of
>filters/detectors to do the amplitude comparison. Two "meters" of course
>(LED lights work well) but a single receiver chain.
>
>Here are some random thoughts...if anybody else cares to weigh in with some
>others, I'd appreciate it.
>
>1. The receiver can use the same local oscillator if the first IF is high
>enough. If we postulate, for example, a 70 MHz. LO, the VCO only has to
>swing from 178 to 260 MHz. That's wide, but certainly doable. Then the
>synthesizer can be switched in a few milliseconds from one frequency to the
>other.
>
>2. The AGC is going to be an interesting challenge, in that it will have to

>be a relatively long time constant so as not to lose the fairly low audio
>frequencies, yet fast enough to settle within our one second time sample.
>
>3. The chips that were available the last time I did an AM design are no
>longer around. If anybody knows of an AM chip that will work up at 70+
>MHz. as the IF strip, I'd sure like to know about it.
>
>Thoughts appreciated.
>
>Jim
>
>
>

aeolus

1975. Use for this transistor?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 05:27:34 UTC
From: Skrewy <ptaylor@qwest.net>
Message-ID: <3C8C4045.948E6903@qwest.net>
Source record: 45717
Cross-posted to: alt.radio.pirate,rec.radio.amateur.homebrew

Hey guys..

I have a NTE470 RF power transistor sitting here that I wanted to put to good use. I'm wondering if anybody knows of a schematic that uses this part. It is a 100W RF power output transistor,2-30Mhz range.

Any ideas?
Also,if anybody desperatly needs this part,I would be willing to sell/trade cheaply.

Thanks a bunch! Patrick.

1976. CMOS switches and RF/mixers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 14:08:45 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3C8CBA6C.FD000FF7@cox.net>
Source record: 45718

>Looks like the new bus switch series devices would do well
>Has anyone tried the TinyLogic series eg Fairchild
>NC7SB3157 SPDT switch?
>I am thinking this could be used in a balanced mixer - due to the double
>throw action it would be inherently balanced
>Could two of these look like a diode ring mixer?
>Richard

These would likely work very well for that purpose. Just remember
to DC bias the inputs to one half the supply voltage.

- Dan, N7VE

1977. Re: Battery assisted power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 14:16:47 UTC
From: post_to_usenet@hotmail.com
Message-ID: <b6b4e772.0203110616.4e0f7f39@posting.google.com>
Source record: 45719

Sylvan Butler <Znospam+noZs_0203@hpb13799Z.Zboi.hpZ.com.invalid> wrote in message news:<slrna8i7lm.f4f.Znospam+noZs_0203@hpb13799Z.Zboi.hpZ.com.invalid>...
> On Fri, 8 Mar 2002 07:20:52 -0500, Bob Lewis (AA4PB) <rlewis@staffnet.com> wrote:
> > useful service life). If you are bulding an unattended backup system
> > then you should have a current limiter set to the maximum bulk charge
> > rate specified for the batteries being used.
>
> Cheap man's "current limiter" == resistor, or put a 12v lamp of the
> proper wattage in series, or put in a 100ft spool of proper gauge

Hi,

Well, my intention is not to use it without mains supply, and never unattended. The fact of being capable to work without mains supply would only be a side benefit.

Regarding the use of a lamp, this is approximately what I had thought about: a 10~20W 6V lamp should be just OK as a NTC, plus, if a short circuit occurs, it should fuse with the 12V and protect the power supply. Apart from this, the power supply works on a ï¿½theoreticallyï¿½ thermally protected regulator.

Toni

1978. TS440 Memory Backup Battery

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 15:37:53 UTC
From: Nobody <NotHere@Nowhere.net>
Message-ID: <3C8CCEDA.700B78ED@Nowhere.net>
Source record: 45720

Has anyone ever changed the lithium memory backup battery in a TS440.
Is it a feasible DIY project....

Ted KD4EE

1979. WANTED: how to homebrew a better SWR noise bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 15:49:44 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0203110749.7c597dd0@posting.google.com>
Source record: 45721
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

I have an MFJ-212 Matchmaker, a noise bridge device I use to adjust my tuner or antenna for minimum SWR. I turn on the Matchmaker, and I can listen to the noise on my transceiver. To minimize the transmiter SWR, I adjust my tuner or antenna for the minimum noise level (as heard from the speaker or as seen on the S meter).

Can anyone here explain how such a noise bridge device works? I have seen a few circuit diagrams, but I would like to know what various parts of the circuit do. (I know there is a small, low-powered transmitter that sends out a fraction of a watt at a wide range of frequencies. The forward voltage and reflected voltage have to be measured. Etc.)

I have just thought up a project: a better SWR noise bridge. I do have a few gripes about this device, and this is my inspiration to build something better. (This project will also give me much-needed practical experience with RF circuits.)

First, I'd rather NOT rely on listening to the transceiver speaker, as signal spikes (whether from noise spikes or other hams transmitting) make it challenging to tune for minimum noise from the noise bridge. I want my homebrewed SWR noise bridge to have its own speaker, which I guess would be less sensitive and would be driven by the SWR ratio and NOT connected to the antenna or transmission line. An alternative is to use a series of light bars/LEDs, analog meters, or a digital display to show the SWR.

Second, I'd like my homebrewed SWR meter to allow for both coarse and fine tuning. The MFJ-212 Matchmaker is very crude - I cannot distinguish between an SWR of 10 and an SWR of 100. Even an SWR of 5 doesn't sound that different from an SWR of 100. Since bandwidth can be VERY narrow on the lower bands (like 40m and 80m), this crudeness is frustrating. I would like my homebrewed SWR noise bridge to have several different modes, such as a crude mode to be used for SWRs over 100 (so I can tell I'm tuning in the right direction on 80m), a coarse mode to be used for SWRs under 100, a medium mode for SWRs under 10, a fine mode for SWRs under 5, and a super-fine mode for SWRs under 2.

The MFJ-212 Matchmaker has some characteristics that I do like and would like to duplicate, however. One is its ability to easily handle at least 100 W (supposedly, as I'm not in the habit of testing this) if you accidentally transmit. Second is the ability to bypass the noise bridge circuit by turning the device off (as I would rather not test its ability to handle 100 W). Third is the use of a 9V battery (which gives me a way to use up partly-used smoke detector batteries).

Jason Hsu, AG4DG
jason_hsu_802701@@@@@yahoo.com
http://www.jasonhsu.com/ham_radio-technical.html

1980. Homebrewing circuits for HF vs. VHF/UHF/microwave

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 15:57:30 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0203110757.4243b7f0@posting.google.com>
Source record: 45722
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

What does it take to homebrew circuits for VHF, UHF, and microwave frequencies? From what I understand, the higher the frequency, the greater the impact of stray capacitances and inductances as the wavelength contracts to the point that it is no longer much larger than the electronic components. I guess this is part of the reason why there are fewer SWR meters and antenna analyzers commercially available for VHF-and-up as compared to HF.

What does it take to overcome the impact of stray capacitances and inductances? More careful construction? Stripline? Anything else?

Jason Hsu, AG4DG
jason_hsu_802701@@@yahoo.com
http://www.jasonhsu.com/ham_radio-technical.html

1981. Re: TS440 Memory Backup Battery

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 16:56:40 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <a6ink8$5q9$0@206.97.58.148>
Source record: 45723

I replaced my battery a couple years back in the TS440. The original
lithium battery has the leads welded onto its case. The approach I took was
to order a battery holder from Mouser and used a lower cost and more
available leadless battery obtained from Wal Mart. I don't recall the
battery number but it was one of the common ones they stocked.

73 de Jack

Nobody wrote in message <3C8CCEDA.700B78ED@Nowhere.net>...
>Has anyone ever changed the lithium memory backup battery in a TS440.
>Is it a feasible DIY project....
>
>Ted KD4EE
>

1982. Re: TS440

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 17:12:14 UTC
From: David Cook <nospam.davepc2@oz.net>
Message-ID: <Oz5j8.18409$702.11567@sccrnsc02>
Source record: 45724

Buck Rogers has tons of connectors and other goodies too:

http://www.buxcommco.com

I like doing business with Buck and his prices are excellent.

-- Dave, WA0TTN

"Nobody" <NotHere@Nowhere.net> wrote in message
news:3C8A7E07.5F7DA2B7@Nowhere.net...
> Looking for part numbers for male plugs to fit accessory sockets on a
> Kenwood TS440 Also would like to contact anyone who has trunk mounted a
> TS440 (or similar)
>
> Thanks
>
> Ted Kester KD4EE
> tk1932@speedfactory.net
>

1983. Re: TS440

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 17:23:09 UTC
From: jeff <wd4nmq@earthlink.net>
Message-ID: <3C8CE851.24F5BB87@earthlink.net>
Source record: 45725

Jim, and anybody else who's interested

About ten years ago I designed a remote control unit for the Kenwood TS-140, little brother to TS-440 which supported a subset of the 440 commands. It used the good old 8051/8031 processor, a 3x4 keypad and a 2 line, 16 char LCD display. I also used a 2764 EPROM, a 74LS374(373?) chip for multiplexing the address/data lines and a 7404 for inverting and driving the serial data lines.

This controller did the following:
Displayed frequency
active VFO, A or B
RIT offset if active
rig transmit or receive status
Whether in split vfo operation or not.

From the key pad you can:
change frequency
Select VFO
enable/disable and modify RIT offset.
Enable/disable scan mode
Up/Down frequency like buttons on mike
select mode
Enable/Disable split VFO operation
Select a memory channel

I to have been playing around of migrating it to a PIC.

But, if anybody is interested, I will supply code and a schematic. Even if it has a higher chip count, only two cheap chips for external EPROM, the design is done and working. If you are interested, drop me a line. I may even get industrious and put the schematic in electronic form and put it and the code on my web site.

Nobody wrote:
>
> Jim & John
>
> Thanks for your quick replies ..... I searched DigiKeys' On Line catalog
> but got mucho hits. I have a TS440 that I am planning to control from the
> front seat with a
> homebrew control head built around a PIC microcontroller. Any ideas, hints,
> comments or references would be appreciated.
>
> Thanks
>

> Ted KD4EE
>
> Jim Higgins wrote:
>
> > On Sat, 09 Mar 2002 21:30:09 GMT, in
> > <3C8A7E07.5F7DA2B7@Nowhere.net>, Nobody <NotHere@Nowhere.net>
> > wrote:
> >
> > >Looking for part numbers for male plugs to fit accessory sockets on a
> > >Kenwood TS440 Also would like to contact anyone who has trunk mounted a
> > >TS440 (or similar)
> > >
> > >Ted Kester KD4EE
> > >tk1932@speedfactory.net
> >
> > Following part numbers are in Digikey Catalog
> > http://www.digikey.com
> >
> > The Mike Plug is a 8-pin DIN, P/N CP-1080-ND
> > Also at Radio Shack. You might find 6 and 7-pin DIN there also.
> >
> > Accessory Jack 1 is a 6-pin DIN, P/N CP-1060-ND
> >
> > Accessory Jack 2 is a 13-pin DIN, P/N CP-1013-ND
> >
> > Remote Connector is a 7-pin DIN, P/N CP-1070-ND
> >
> > AFSK in/out & Accessory 3 take an RCA plug, Get a handful at
> > Radio Shack
> >
> > --
> > Jim Higgins, quasimodo AT yahoo DOT com
> > icbm: 33.55.34N, 80.24.21W

--
Jeff, wd4nmq
wd4nmq@earthlink.net
http://home.earthlink.net/~wd4nmq

1984. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 18:16:20 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <4hrp8u0mt36bk1rqqmch292cn109e9e6pa@4ax.com>
Source record: 45726
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

On Sun, 10 Mar 2002 15:10:10 -0800, "Jim Weir" <jim@rst-engr.com>
wrote:

>Here are some random thoughts...if anybody else cares to weigh in with some
>others, I'd appreciate it.
>
>1. The receiver can use the same local oscillator if the first IF is high
>enough. If we postulate, for example, a 70 MHz. LO, the VCO only has to
>swing from 178 to 260 MHz. That's wide, but certainly doable. Then the
>synthesizer can be switched in a few milliseconds from one frequency to the
>other.
>
>2. The AGC is going to be an interesting challenge, in that it will have to
>be a relatively long time constant so as not to lose the fairly low audio
>frequencies, yet fast enough to settle within our one second time sample.
>
>3. The chips that were available the last time I did an AM design are no
>longer around. If anybody knows of an AM chip that will work up at 70+
>MHz. as the IF strip, I'd sure like to know about it.
>
>Thoughts appreciated.

Jim, I'd be concerned about what the front end of this receiver would
have to put up with. With FM broadcast stations on the low side, and
TV broadcast transmitters in between, you'll need an awfully strong
front end to avoid IMD problems. In other words, a strong JFET or DBM
mixer with lots of LO power would be advised if you're thinking of
this scheme. The two receiver method avoids this headache by having
two separate front end systems with filtering on each band.

Also you'll need to be much more careful to keep phase noise within
reason. With two separate VCOs the opportunity for noise to become a
major factor is substantially reduced.

As for AGC, why bother? Why not use audio DSP to detect and rectify
each tone? Nobody really listens to this stuff for high fidelity.
Put a crude limiter on the monitor audio...

I think reason why you haven't seen your scheme before is because
although it's not all that hard to do, it would be hard to do well.

73,

Jake Brodsky, mailto:frussle@erols.com
PP ASEL IA, Cessna Cardinal N30946, Based @ FME

Amateur Radio Station AB3A

1985. Re: WANTED: how to homebrew a better SWR noise bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 18:23:38 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <jqpp8us6canh75nbmn9v28ob9umi93ulv8@4ax.com>
Source record: 45727
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On 11 Mar 2002 07:49:44 -0800, jason_hsu@my-deja.com (Jason Hsu)
wrote:

>I have an MFJ-212 Matchmaker, a noise bridge device I use to adjust my
>tuner or antenna for minimum SWR. I turn on the Matchmaker, and I can
>listen to the noise on my transceiver. To minimize the transmiter
>SWR, I adjust my tuner or antenna for the minimum noise level (as
>heard from the speaker or as seen on the S meter).
>
>Can anyone here explain how such a noise bridge device works? I have
>seen a few circuit diagrams, but I would like to know what various
>parts of the circuit do. (I know there is a small, low-powered
>transmitter that sends out a fraction of a watt at a wide range of
>frequencies. The forward voltage and reflected voltage have to be
>measured. Etc.)

I think you already list the significant attributes; but in a nutshell
it is a white noise generator (white noise meaning a broadband
emission of RF - from ELF to low VHF).

>
>I have just thought up a project: a better SWR noise bridge. I do
>have a few gripes about this device, and this is my inspiration to
>build something better. (This project will also give me much-needed
>practical experience with RF circuits.)

Being better means one of two things: more power, or better white
noise characteristic. It is highly unlikely you need a better white
noise characteristic (if the bridge works at any frequency, it works
just at well at all frequencies).

>
>First, I'd rather NOT rely on listening to the transceiver speaker, as
>signal spikes (whether from noise spikes or other hams transmitting)
>make it challenging to tune for minimum noise from the noise bridge.

Turn off AGC/AVC.

>I want my homebrewed SWR noise bridge to have its own speaker, which I
>guess would be less sensitive and would be driven by the SWR ratio and
>NOT connected to the antenna or transmission line. An alternative is
>to use a series of light bars/LEDs, analog meters, or a digital
>display to show the SWR.

This goes wholly beyond the scope of the instrument; this is the
source, after-all, not the load.

>
>Second, I'd like my homebrewed SWR meter to allow for both coarse and
>fine tuning. The MFJ-212 Matchmaker is very crude - I cannot
>distinguish between an SWR of 10 and an SWR of 100. Even an SWR of 5
>doesn't sound that different from an SWR of 100. Since bandwidth can
>be VERY narrow on the lower bands (like 40m and 80m), this crudeness
>is frustrating. I would like my homebrewed SWR noise bridge to have
>several different modes, such as a crude mode to be used for SWRs over
>100 (so I can tell I'm tuning in the right direction on 80m), a coarse
>mode to be used for SWRs under 100, a medium mode for SWRs under 10, a
>fine mode for SWRs under 5, and a super-fine mode for SWRs under 2.
>

Hi Jason,

Nearly all that you ask for above is a product or problem of your rig. The noise bridge approach is the simplest, (arguably) cheapest alternative to on-air tune up. An even simpler and (unarguably) cheaper method would be to use on the air signals. The problem here, solved by the white noise source, is there may be no signal, the signal may be variable for many reasons, the signal may drift and so on. The white noise source on the other hand provides a fixed level signal at ALL frequencies that is usually greater than over the air signal levels.

However, as to this last, in a 3.2 kHz band with at ANY particular frequency we are talking about a total noise (frequency) power of -73 dBm for an S-9 reading (if, in fact, you experience it at this level). This is a far cry from a fraction of a watt nearly 100 dB away; and this disparity reveals how the power is divvied up along the RF spectrum.

If you want to improve your bridge, it would be to bump up the gain to 1W or add a wideband 10dB gain amplifier. As simple as this point may seem, it will definitely test your self-challenge:
>(This project will also give me much-needed
>practical experience with RF circuits.)
Building stable wide band amplifiers is the bed rock of RF design. You should have a copy (or good treatment) of H.W. Bode by now(?).

It could also serve as the basis for many simple Shack radio standards. My white noise source consists of a weakly, LED illuminated, Photomultiplier Tube terminated with a 50 Ohm resistor (the apparent source as the PMT is a constant current device). This provides me with a white noise bandwidth out to >1GHz.

73's
Richard Clark, KB7QHC

1986. Re: Homebrewing circuits for HF vs. VHF/UHF/microwave

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 18:36:47 UTC
From: Bob Liesenfeld <robert.liesenfeld@neicoltech.org>
Message-ID: <3C8CF93F.1FC41B46@neicoltech.org>
Source record: 45728
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Jason Hsu wrote:

> What does it take to homebrew circuits for VHF, UHF, and microwave
> frequencies?

Hi Jason,
My experience has been that using 'dead bug' construction (also known as 'dirty') works very well up to 1.5GHz and perhaps higher. Lead length must be reduced to a minimum (zero if possible) and this type of construction allows for this quite well.

Bob WB0POQ

1987. Re: Homebrewing circuits for HF vs. VHF/UHF/microwave

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 18:46:08 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <hltp8u8kuc1qb9g26esaifn3a51hfjf3km@4ax.com>
Source record: 45729
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On 11 Mar 2002 07:57:30 -0800, jason_hsu@my-deja.com (Jason Hsu)
wrote:

>What does it take to homebrew circuits for VHF, UHF, and microwave
>frequencies? From what I understand, the higher the frequency, the
>greater the impact of stray capacitances and inductances as the
>wavelength contracts to the point that it is no longer much larger
>than the electronic components. I guess this is part of the reason
>why there are fewer SWR meters and antenna analyzers commercially
>available for VHF-and-up as compared to HF.
>
>What does it take to overcome the impact of stray capacitances and
>inductances? More careful construction? Stripline? Anything else?
>
>Jason Hsu, AG4DG
>jason_hsu_802701@@@yahoo.com
>http://www.jasonhsu.com/ham_radio-technical.html

Hi Jason,

Modularize your stages or functional blocks: mixer on one board, VCO
on another board, MOD/DEMOD on yet another and so on. Shield each
module (should go without saying). By pass power and control lines.
Observe proper grounding techniques.

Actually, the last point about observing proper grounding is the most
difficult to implement. The failures to observe are found in ALL the
common design problems (coupling problems, birdies, instability,
offset, noise...). Modularization tends to increase this hazard, but
mono designs do not fare much the better.

You also need to characterize each module. Build and test it to
complete specification. It is highly likely you want to preserve your
investment; then make it generally useful. For example, design the
mixer board to a spec that is more easily met across a spread of
applications you might want to test it in. This means that most I/O
will be designed around the 50 Ohm standard. You will already find
that most commercial packages anticipate this.

What you already describe as difficulties can be limited to the module
board and the problem isolated to an obvious source. Most UHF/SHF
design is quite intuitive and straightforward when you consider the
geometries and wavelength. On the other hand, there are greater
difficulties that arise from the complexity of the modulation, or in
the control of AGC (or its application). That is to say, there is

usually more grief to be found in the "system" signals than in the RF path.

73's
Richard Clark, KB7QHC

1988. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 19:12:58 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <fily+9B6GQj8EwRc@jmwa.demon.co.uk>
Source record: 45731
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that Jake Brodsky <frussle@erols.com>
wrote (in <4hrp8u0mt36bk1rqqmch292cn109e9e6pa@4ax.com>) about 'Unusual
AM Receiver Design', on Mon, 11 Mar 2002:
>Jim, I'd be concerned about what the front end of this receiver would
>have to put up with. With FM broadcast stations on the low side, and
>TV broadcast transmitters in between, you'll need an awfully strong
>front end to avoid IMD problems. In other words, a strong JFET or DBM
>mixer with lots of LO power would be advised if you're thinking of
>this scheme. The two receiver method avoids this headache by having
>two separate front end systems with filtering on each band.

Cross-modulation could be a serious problem indeed. But a low-gain r.f.
stage with *input* tuned circuits for both frequency bands would be a
feasible solution.
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

1989. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 19:50:02 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u8q2j2t3plqn0a@corp.supernews.com>
Source record: 45730
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

"red rover" <natpress@sympatico.ca> wrote in message
news:YwWi8.10323$Yg2.679669@news20.bellglobal.com...
> Well a DDS like the ADI AD98xx series could be
>
> http://www.analog.com/productSelection/pdf/ad9830.pdf
>
> be a digitally programmable mixer letting you precisely
> pick the frequency in 108-112 MHz range or the
> 325- 340 MHz range with great precision.

Except that this part, and indeed most parts of this genre have an upper frequency limit of 50 MHz.. I did a pretty thorough job of scanning the data sheet for tricks to get it to operate up in the 100 and 300 MHz. region and didn't meet with much success.

>
> Now you can mix this down to DC or use another DSP
> trick of sub-sampling which John refered to as
> "direct IF sub-Nyquist digitizing". In this case you use the
> ADC as another mixer.

And you still run into the fact that the frequency of interest is well out of DSP current capability, at least the way I read things.

>
> Now, after mixing down you could look for the 90Hz and 150Hz using
> an FFT. An example would be running a 64 point FFT with a bandwidth
> of 240Hz. You sample at 480Hz (twice the highest frequency) and then
> every bin (frequency) is 3.75Hz apart. The 24th frequency is exactly 90Hz
> and the 40th is exactly 150Hz.

And I'm trying to understand how you get the amplitude component out of an FFT after you do the messing around to select the proper frequency component.

>
> The name of the game is trade off the precision caps/resistors (which
never
> really drop in price much) and have accuracy in the 1, 2 and 5% ranges for
> digital processing (which continuosly gets cheaper and better).

That's why we design in at least one variable component. Yes, they age, and yes, they need occasional calibration, but a 2 cent 5% capacitor still isn't anywhere near the digital processing cost.

>
> Many DSP's have almost all the functions you need built-in. They have
ADCs,
> DACs,
> GPIO etc. It could do the FFT, the AGC, drive your audio out, do the
tuning,
> drive
> the display etc.

And I'm still trying to search the literature to find one that will work in
VHF. Any suggestions?

Jim

1990. Re: WANTED: how to homebrew a better SWR noise bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 22:14:04 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0203111414.502f6247@posting.google.com>
Source record: 45732
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<jqpp8us6canh75nbmn9v28ob9umi93ulv8@4ax.com>...
>
> Turn off AGC/AVC.
>
What is AGC/AVC? (I'm not even sure if my radio has it.)

> >I want my homebrewed SWR noise bridge to have its own speaker, which I
> >guess would be less sensitive and would be driven by the SWR ratio and
> >NOT connected to the antenna or transmission line. An alternative is
> >to use a series of light bars/LEDs, analog meters, or a digital
> >display to show the SWR.
>
> This goes wholly beyond the scope of the instrument; this is the
> source, after-all, not the load.
>
OK, I can see that a white noise generator wouldn't work here. I
guess some type of miniature signal generator (with a knob or other
control on the device) is needed to ensure transmission at just one
frequency.

> >
> >Second, I'd like my homebrewed SWR meter to allow for both coarse and
> >fine tuning. The MFJ-212 Matchmaker is very crude - I cannot
> >distinguish between an SWR of 10 and an SWR of 100. Even an SWR of 5
> >doesn't sound that different from an SWR of 100. Since bandwidth can
> >be VERY narrow on the lower bands (like 40m and 80m), this crudeness
> >is frustrating. I would like my homebrewed SWR noise bridge to have
> >several different modes, such as a crude mode to be used for SWRs over
> >100 (so I can tell I'm tuning in the right direction on 80m), a coarse
> >mode to be used for SWRs under 100, a medium mode for SWRs under 10, a
> >fine mode for SWRs under 5, and a super-fine mode for SWRs under 2.
> >
>
> Hi Jason,
>
> Nearly all that you ask for above is a product or problem of your rig.
> The noise bridge approach is the simplest, (arguably) cheapest
> alternative to on-air tune up. An even simpler and (unarguably)
> cheaper method would be to use on the air signals. The problem here,
> solved by the white noise source, is there may be no signal, the
> signal may be variable for many reasons, the signal may drift and so
> on. The white noise source on the other hand provides a fixed level
> signal at ALL frequencies that is usually greater than over the air

> signal levels.
>
The white noise signal isn't always much greater than over-the-air signals. The over-the-air signals can be significant on 40m and 80m at night. And while my radio does have an attenuator, this affects the white noise AND the on-air noise.

1991. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 22:15:45 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0203111415.7ea80c7c@posting.google.com>
Source record: 45733
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

"Jim Weir" <jim@rst-engr.com> wrote in message news:<u8q2j2t3plqn0a@corp.supernews.com>...

[snipped...]

> And I'm trying to understand how you get the amplitude component out of an
> FFT after you do the messing around to select the proper frequency
> component.
>

For each frequency bin in the FFT:

Power in dBm = 10*log10(I*I+Q*Q)+13.01

where I and Q are the inphase (real) and Quadrature (imaginary)
components of the FFT output. 13.01 is the 'magic number' to convert
to dBm, assuming a 50 ohm load. You will have to use a different
number if the circuit impedance is not 50 ohms. If the time domain
input is a real series, as opposed to complex numbers, the signal will
show up in two places and you will have to add 3 dB to the above
value.

If you want voltage magnitude, volts = sqrt(I*I+Q*Q)

For the frequency component, assuming the typical fft output with 0
frequency in the first bin:

Frequency of bin = (Bin Number) * (a/d sample rate)/(number of
samples used)

The first bin is numbered 0, etc. 'number of samples' will be a power
of 2.

Without writing a book on FFTs, this should get you started.

Jim
N8EE

1992. Updated Homebrew Amplifier Links

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 22:34:48 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <3C8D3110.DC547A25@amsat.org>
Source record: 45734

At URL:
http://ac6v.com/homebrew.htm

Lots of other homebrew links there also --- sorry no beer recipes!
--
73 From AC6V, Rod In Oceanside, CA
I doubt, therefore I might be!

AC6V Mega Ham Index at http://ac6v.com
AC6V Book For DXers at http://ac6v.com/DXSAMPLE.htm

1993. Re: WANTED: how to homebrew a better SWR noise bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 22:39:08 UTC
From: k7itm@aol.com
Message-ID: <3200347.0203111439.338e626c@posting.google.com>
Source record: 45735
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

For the first questions, have a look at some of the very good postings
that have been made on how directional couplers work. You should be
able to find some in the Google archives. For example, I posted one
explanation back in 1992 under the title, "A (long) look at SWR &
directional pwr mtrs" that you should be able to find. But there are
plenty more of them...some other by me, many by others.

One thing to consider in building your dream tuner-tuning aid is that
noise excitation is very broadband, and you ultimately need a circuit
that's more narrowband than the tuning you're trying to achieve. Your
receiver does this for you with a noise bridge: you only listen to a
small piece of the spectrum. If you're going to have a speaker in
the tuning aid, you might consider using narrowband excitation instead
of narrowband detection.

There've been some articles on using the very sensitive Analog Devices
logarithmic RF detectors to measure SWR. You should probably have a
look for/at them. Some of them probably come very close to what you
want. Actually, one of your complaints is that it's hard to tell that
you're getting closer to proper tuning when you're a badly de-tuned.
You could help that a LOT if you displayed not SWR but load impedance.
There's a lot more info about how to tune if you know the line is
presenting 2 ohms, or 5+j61 ohms, or 1250 ohms...all about 25:1 SWR
(to a 50 ohm system).

Cheers,
Tom

jason_hsu@my-deja.com (Jason Hsu) wrote in message
news:<f7d9a152.0203110749.7c597dd0@posting.google.com>...
> I have an MFJ-212 Matchmaker, a noise bridge device I use to adjust my
> tuner or antenna for minimum SWR. I turn on the Matchmaker, and I can
> listen to the noise on my transceiver. To minimize the transmiter
> SWR, I adjust my tuner or antenna for the minimum noise level (as
> heard from the speaker or as seen on the S meter).
>
> Can anyone here explain how such a noise bridge device works? I have
> seen a few circuit diagrams, but I would like to know what various
> parts of the circuit do. (I know there is a small, low-powered
> transmitter that sends out a fraction of a watt at a wide range of
> frequencies. The forward voltage and reflected voltage have to be
> measured. Etc.)
>
> I have just thought up a project: a better SWR noise bridge. I do

> have a few gripes about this device, and this is my inspiration to
> build something better. (This project will also give me much-needed
> practical experience with RF circuits.)
>
> First, I'd rather NOT rely on listening to the transceiver speaker, as
> signal spikes (whether from noise spikes or other hams transmitting)
> make it challenging to tune for minimum noise from the noise bridge.
> I want my homebrewed SWR noise bridge to have its own speaker, which I
> guess would be less sensitive and would be driven by the SWR ratio and
> NOT connected to the antenna or transmission line. An alternative is
> to use a series of light bars/LEDs, analog meters, or a digital
> display to show the SWR.
>
> Second, I'd like my homebrewed SWR meter to allow for both coarse and
> fine tuning. The MFJ-212 Matchmaker is very crude - I cannot
> distinguish between an SWR of 10 and an SWR of 100. Even an SWR of 5
> doesn't sound that different from an SWR of 100. Since bandwidth can
> be VERY narrow on the lower bands (like 40m and 80m), this crudeness
> is frustrating. I would like my homebrewed SWR noise bridge to have
> several different modes, such as a crude mode to be used for SWRs over
> 100 (so I can tell I'm tuning in the right direction on 80m), a coarse
> mode to be used for SWRs under 100, a medium mode for SWRs under 10, a
> fine mode for SWRs under 5, and a super-fine mode for SWRs under 2.
>
> The MFJ-212 Matchmaker has some characteristics that I do like and
> would like to duplicate, however. One is its ability to easily handle
> at least 100 W (supposedly, as I'm not in the habit of testing this)
> if you accidentally transmit. Second is the ability to bypass the
> noise bridge circuit by turning the device off (as I would rather not
> test its ability to handle 100 W). Third is the use of a 9V battery
> (which gives me a way to use up partly-used smoke detector batteries).
>
> Jason Hsu, AG4DG
> jason_hsu_802701@@@@@yahoo.com
> http://www.jasonhsu.com/ham_radio-technical.html

1994. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 22:48:21 UTC
From: Rob Turk <r.turk@chello.nl>
Message-ID: <a6jc3b$j0e$1@ncc1701.cistron.net>
Source record: 45736
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

"Jim Weir" <jim@rst-engr.com> wrote in message
news:u8npuk77l2fuf5@corp.supernews.com...
> There is a rather unique aviation navigation signal (localizer and
> glide-slope) that utilizes AM modulation. At dead-center on either the
> runway centerline (localizer) and on the correct angle down to the runway
> (glideslope) there are two low audio tones that are equal. The tones are 90
> and 150 Hz. As you drift away from centerline one way (or drift away from
> the glide path) one tone or the other will predominate, depending on which
> way you are drifting. Rectifying these two signals and driving a left-right
> meter (localizer) or up-down meter (glideslope) lets the pilot literally
> "fly the beam" down to near the ground.
>
> The classic way of doing this is by having two independent receivers, two
> detectors, and two meters. The localizer frequencies are between 108.1 and
> 111.9 MHz., and they are "paired" with glideslope carrier frequencies in the
> 330 MHz. area. That is, for a given localizer frequency, there is a
> predetermined glideslope frequency.
>
> Since things on an instrument approach happen somewhat slowly, it seems to
> me that a single receiver that was timeshared for (say) a second on the
> localizer and then a second on the glideslope, back and forth, would save
> well over half the complexity of the design. Not only that, but since the
> AM tones are the same for both localizer and glideslope, it also seems like
> a relatively simple sample-and-hold would work to let us use one set of
> filters/detectors to do the amplitude comparison. Two "meters" of course
> (LED lights work well) but a single receiver chain.
>
> Here are some random thoughts...if anybody else cares to weigh in with some
> others, I'd appreciate it.
>
> 1. The receiver can use the same local oscillator if the first IF is high
> enough. If we postulate, for example, a 70 MHz. LO, the VCO only has to
> swing from 178 to 260 MHz. That's wide, but certainly doable. Then the
> synthesizer can be switched in a few milliseconds from one frequency to the
> other.
>
> 2. The AGC is going to be an interesting challenge, in that it will have to
> be a relatively long time constant so as not to lose the fairly low audio
> frequencies, yet fast enough to settle within our one second time sample.
>
> 3. The chips that were available the last time I did an AM design are no
> longer around. If anybody knows of an AM chip that will work up at 70+
> MHz. as the IF strip, I'd sure like to know about it.

>
> Thoughts appreciated.
>
> Jim

If the distance between the two signals is always the same, how about planning the VCO frequencies such that all you need is a high-pass and a low-pass filter to receive either frequency? That way you don't need to re-tune the VCO, you simply switch your VCO signal from the high-side mixer to the low-side mixer.

Rob

1995. Digital Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 22:55:14 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3C8D3622.1B89566F@alma.demon.co.uk>
Source record: 45737

Just a thought.

I was wondering whether it is possible to build a superhet type receiver
but using a digital mixer for the LO and incoming signal, i.e. an XOR
gate. I can get hold of a fairly useful programmable PLL chip from work
which should work as a suitable LO, although it may need a bit of
dividing down.

Is there a way to get the input signal into a suitable digital form?
Will the XOR mixer work?
What do you do with the resulting signal?

regards...

--Gary

1996. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 23:15:03 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u8qeju2hghed89@corp.supernews.com>
Source record: 45738
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

I guess I wasn't as clear as I might have been. The pattern of glideslope frequencies has no regular mathematical relationship to the localizer frequencies. That is, (for example) 108.1 is paired with 334.7, 108.3 is paired with 334.1, 108.5 is paired with 329.9, 108.7 is paired with 330.5, and so on. It would appear as though somebody sat down with a random number table to do the pairing.

Jim

">
> If the distance between the two signals is always the same, >

1997. Radioamateur Chat!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-11 23:39:23 UTC
From: Ja <ja@ja.com>
Message-ID: <usfq8u4pjm04jg1g3obv6m90gbnu094j0d@4ax.com>
Source record: 45739

http://www.qsl.net/9a8ra/
73..

1998. Re: Digital Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 00:35:11 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c8d4bf3$0$17471@echo-01.iinet.net.au>
Source record: 45740

We have been having a discussion on the use of CMOS switches for this purpose. I think you would have to have a linear path for the RF signal. A digital device would have to be biased to its linear region unless you are happy with square waves in and out...

Richard

"Gary Morton" <gary@alma.demon.co.uk> wrote in message news:3C8D3622.1B89566F@alma.demon.co.uk...
> Just a thought.
>
> I was wondering whether it is possible to build a superhet type receiver
> but using a digital mixer for the LO and incoming signal, i.e. an XOR
> gate. I can get hold of a fairly useful programmable PLL chip from work
> which should work as a suitable LO, although it may need a bit of
> dividing down.
>
> Is there a way to get the input signal into a suitable digital form?
> Will the XOR mixer work?
> What do you do with the resulting signal?
>
> regards...
>
> --Gary

1999. Re: CMOS switches and RF/mixers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 01:16:29 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c8d55a1$0$17462@echo-01.iinet.net.au>
Source record: 45741

Dan
I am trying to visualize how they would be connected.
Two of them could be made to look like a ring mixer (I think) but I am not exactly sure how it all goes together
I guess it would look like input->3dB hybrid splitter->2 single ended inputs. Outputs cross connected (ie 1A+2B and 2A+1B) to a differential input device (eg opamp or balanced transformer). LO switches at 180 degrees
They are very small (SSOP size) 6 pin devices
It may be difficult getting them in hobbyist quantities.
What do you think?

Richard

"Dan Tayloe" <dtayloe@cox.net> wrote in message
news:3C8CBA6C.FD000FF7@cox.net...
> >Looks like the new bus switch series devices would do well
> >Has anyone tried the TinyLogic series eg Fairchild
> >NC7SB3157 SPDT switch?
> >I am thinking this could be used in a balanced mixer - due to the double
> >throw action it would be inherently balanced
> >Could two of these look like a diode ring mixer?
> >Richard
>
> These would likely work very well for that purpose. Just remember
> to DC bias the inputs to one half the supply voltage.
>
> - Dan, N7VE

2000. Re: CMOS switches and RF/mixers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 01:38:04 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3C8D5BFC.1F90BE96@sympatico.ca>
Source record: 45742

maxim also makes fet switches.
Check out the info at the Mini-Circuits Website. Their page on High IP3 mixers shows a fet mixer arrangement.
bk

Richard Hosking wrote:

> Dan
> I am trying to visualize how they would be connected.
> Two of them could be made to look like a ring mixer (I think) but I am not
> exactly sure how it all goes together
> I guess it would look like input->3dB hybrid splitter->2 single ended
> inputs. Outputs cross connected (ie 1A+2B and 2A+1B) to a differential input
> device (eg opamp or balanced transformer). LO switches at 180 degrees
> They are very small (SSOP size) 6 pin devices
> It may be difficult getting them in hobbyist quantities.
> What do you think?
>
> Richard
>
> "Dan Tayloe" <dtayloe@cox.net> wrote in message
> news:3C8CBA6C.FD000FF7@cox.net...
> > >Looks like the new bus switch series devices would do well
> > >Has anyone tried the TinyLogic series eg Fairchild
> > >NC7SB3157 SPDT switch?
> > >I am thinking this could be used in a balanced mixer - due to the double
> > >throw action it would be inherently balanced
> > >Could two of these look like a diode ring mixer?
> > >Richard
> >
> > These would likely work very well for that purpose. Just remember
> > to DC bias the inputs to one half the supply voltage.
> >
> > - Dan, N7VE

2001. Re: Homebrewing circuits for HF vs. VHF/UHF/microwave

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 02:28:58 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C8D6814.440@pop.removethistomailme.net>
Source record: 45743
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Jason Hsu wrote:
>
> What does it take to homebrew circuits for VHF, UHF, and microwave
> frequencies? From what I understand, the higher the frequency, the
> greater the impact of stray capacitances and inductances as the
> wavelength contracts to the point that it is no longer much larger
> than the electronic components. I guess this is part of the reason
> why there are fewer SWR meters and antenna analyzers commercially
> available for VHF-and-up as compared to HF.
>
> What does it take to overcome the impact of stray capacitances and
> inductances? More careful construction? Stripline? Anything else?
>
> Jason Hsu, AG4DG
> jason_hsu_802701@@@yahoo.com
> http://www.jasonhsu.com/ham_radio-technical.html

Bob and Richard's advice is spot on. Solder components directly to bare copper board and minimize their lead lengths. Modularize everything (SMA jacks and the Hammond 1590-series boxes are your friends). And watch out for ground loops (I would not put a VCO in its own chassis, because you will NEVER get the ground currents out of the tuning line).

Ugly construction is usable to 2 GHz easily. If you keep your connections under 1/10 wavelength or so (~1 cm at 2.4 GHz), then you can avoid a lot of the nasty transmission-line behavior that people usually worry about at these frequencies. Just rely on 50-ohm building blocks as much as you can (if Hammond is your friend, then http://www.minicircuits.com is your next-door-neighbor who works for Victoria's Secret), and plan to give up about 0.5 dB per device due to VSWR.

There are a few photos of hand-wired VHF-to-microwave projects on my site (below), including a complete synthesizer with 1 Hz resolution between 1 and 2 GHz that fits in a single 4x2x1 Hammond box. The ugly RF wiring is completely buried under other parts, but it's there.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2002. MFJ 259 Fault

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 02:43:22 UTC
From: Bob <bob@m0kkw.freeserve.co.uk>
Message-ID: <a6jq0a$o6p$1@news5.svr.pol.co.uk>
Source record: 45744

My 259 analyser has packed up, just reading zeros in the analyser mode although the counter seems to be working. Looks like the oscillator has stopped. Has anyone else seen this fault, or even fixed it? MFJ service non existent, won't be buying any more of this rubbish having seen inside it!

73 Bob M0KKW

2003. Re: Homebrewing circuits for HF vs. VHF/UHF/microwave

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 03:49:53 UTC
From: JD <dyson@jdyson.com>
Message-ID: <OLej8.261$Mx3.66193@news1.iquest.net>
Source record: 45745
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message
news:3C8D6814.440@pop.removethistomailme.net...
> Jason Hsu wrote:
> >
> > What does it take to homebrew circuits for VHF, UHF, and microwave
> > frequencies? From what I understand, the higher the frequency, the
> > greater the impact of stray capacitances and inductances as the
> > wavelength contracts to the point that it is no longer much larger
> > than the electronic components. I guess this is part of the reason
> > why there are fewer SWR meters and antenna analyzers commercially
> > available for VHF-and-up as compared to HF.
> >
> > What does it take to overcome the impact of stray capacitances and
> > inductances? More careful construction? Stripline? Anything else?
> >
> > Jason Hsu, AG4DG
> > jason_hsu_802701@@@yahoo.com
> > http://www.jasonhsu.com/ham_radio-technical.html
>
> Bob and Richard's advice is spot on. Solder components directly to bare
> copper board and minimize their lead lengths. Modularize everything
> (SMA jacks and the Hammond 1590-series boxes are your friends). And
> watch out for ground loops (I would not put a VCO in its own chassis,
> because you will NEVER get the ground currents out of the tuning line).
>
> Ugly construction is usable to 2 GHz easily. If you keep your
> connections under 1/10 wavelength or so (~1 cm at 2.4 GHz), then you can
> avoid a lot of the nasty transmission-line behavior that people usually
> worry about at these frequencies. Just rely on 50-ohm building blocks
> as much as you can (if Hammond is your friend, then
> http://www.minicircuits.com is your next-door-neighbor who works for
> Victoria's Secret), and plan to give up about 0.5 dB per device due to
> VSWR.
>
If you need just a bit higher performance than some of the minicircuits
stuff, you might want to try www.stanfordmicro.com. They even oem
some of the minicircuits stuff. Richardson in the US distributes their
stuff, and it is readily available.

One part of note provides about 1.6dB NF, and has better than 10mw output
power. It is also SiGe which will do better in some cases (e.g. LF noise)
than more aggresive PHEMTs.

There is a designers kit for Stanford micro stuff, that also includes some fabricated PC boards to build example circuits.

John

2004. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 04:15:19 UTC
From: red rover <natpress@sympatico.ca>
Message-ID: <2gfj8.12964$Yg2.1145215@news20.bellglobal.com>
Source record: 45746
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

Well there are several ways to handle this.
You have to do some analysis and tradeoffs.

Read something like this...
http://www.intersil.com/data/an/an9/an9509/an9509.pdf
and this.....
http://www.analog.com/productSelection/pdf/AD6620_a.pdf
and this
http://www.hunteng.co.uk/solutions/digitalradio_sol.htm
and this
http://www.ece.jcu.edu.au/eric/thesis/DigitalRx/txdr01specs.htm

to get your mind thinking of other ways of doing it. The bandwidth
(not the frequency) you have to handle is small and contains little
data. That makes somethings easier. Many ADCs are now spec'd
for IF use. In the old days (> 5years ago say) they assumed Nyquist
sampling and often didn't spec. analog bandwidth beyond 1/2 the max
sampling rate (or they deliberately limited it to reduce noise). Now they
realize people are using it for downconversion.

Look a this datasheet
http://focus.ti.com/docs/prod/productfolder.jhtml?genericPartNumber=ADS2807
50MHz sample rate but an analog bandwidth of 270MHz.

You only need to use your the DDS to span the tuning range which in
your case has a 15MHz span (325-340MHz). You could put a fixed
downcovertor in the path and use a DDS to tune in the final frequency
that the ADC will do the final fixed downconversion on. Or you could
vary the ADC clock. There are also digital mixers so you mix it after
it is digitized.

I use to design cable modems that ran up to 750MHz and with a DDS
that couldn't clock higher than 50MHz. Which reminds me, the frequencies
you are using are in the Cable TV band. You could whack down a dirt
cheap digitally programmable TV tuner to pull the data down to a frequency
the DDS could use. But be careful of microphonics. The vibration of TV
tuners can through off the tuning (could be OK in this application) and I
expect planes to vibrate alot.

Steve

Jim Weir wrote in message ...
>
>"red rover" <natpress@sympatico.ca> wrote in message
>news:YwWi8.10323$Yg2.679669@news20.bellglobal.com...

>> Well a DDS like the ADI AD98xx series could be
>>
>> http://www.analog.com/productSelection/pdf/ad9830.pdf
>>
>> be a digitally programmable mixer letting you precisely
>> pick the frequency in 108-112 MHz range or the
>> 325- 340 MHz range with great precision.
>
>Except that this part, and indeed most parts of this genre have an upper
>frequency limit of 50 MHz.. I did a pretty thorough job of scanning the
>data sheet for tricks to get it to operate up in the 100 and 300 MHz.
region
>and didn't meet with much success.
>
>
>
>
>>
>> Now you can mix this down to DC or use another DSP
>> trick of sub-sampling which John refered to as
>> "direct IF sub-Nyquist digitizing". In this case you use the
>> ADC as another mixer.
>
>And you still run into the fact that the frequency of interest is well out
>of DSP current capability, at least the way I read things.
>
>
>>
>> Now, after mixing down you could look for the 90Hz and 150Hz using
>> an FFT. An example would be running a 64 point FFT with a bandwidth
>> of 240Hz. You sample at 480Hz (twice the highest frequency) and then
>> every bin (frequency) is 3.75Hz apart. The 24th frequency is exactly 90Hz
>> and the 40th is exactly 150Hz.
>
>And I'm trying to understand how you get the amplitude component out of an
>FFT after you do the messing around to select the proper frequency
>component.
>
>
>>
>> The name of the game is trade off the precision caps/resistors (which
>never
>> really drop in price much) and have accuracy in the 1, 2 and 5% ranges
for
>> digital processing (which continuosly gets cheaper and better).
>
>That's why we design in at least one variable component. Yes, they age,
and
>yes, they need occasional calibration, but a 2 cent 5% capacitor still
isn't

>anywhere near the digital processing cost.
>
>
>
>
>>
>> Many DSP's have almost all the functions you need built-in. They have
>ADCs,
>> DACs,
>> GPIO etc. It could do the FFT, the AGC, drive your audio out, do the
>tuning,
>> drive
>> the display etc.
>
>And I'm still trying to search the literature to find one that will work in
>VHF. Any suggestions?
>
>Jim
>
>
>

2005. Re: Digital Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 05:21:07 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0203112121.13a6e311@posting.google.com>
Source record: 45647

Gary Morton <gary@alma.demon.co.uk> wrote in message
news:<3C8D3622.1B89566F@alma.demon.co.uk>...
> Just a thought.
>
> I was wondering whether it is possible to build a superhet type receiver
> but using a digital mixer for the LO and incoming signal, i.e. an XOR
> gate. I can get hold of a fairly useful programmable PLL chip from work
> which should work as a suitable LO, although it may need a bit of
> dividing down.
>
> Is there a way to get the input signal into a suitable digital form?
> Will the XOR mixer work?
> What do you do with the resulting signal?
>
> regards...
>
> --Gary

But what would be the advantage? An XOR doesn't strike me as anyting
special in the way of a mixer. You see it used when there are already
digital signals, though what I recall the signals have been oscillator
outputs. And you have the trouble of making the conversion to digital
before you can use such a mixer, and then deal with the digital signal
later on in the signal path.

The one "digital mixer" that I always thought intriguing was a "Type-D
mixer", ie a type-D flip-flop, that acts sort of like a low-pass filter.
There might be use there, but I don't see it worth the trouble of
doing a conversion to digital first.

You can find plenty of mixers that will work with a square wave signal,
indeed expect a square wave signal. If nothing else, people have used
CMOS switches as mixers, and they need a square wave for clocking. So
you use your PLL to clock the mixer, but the analog signal from the
antenna remains analog.

I see on second reading that you ask what to do after the mixer. That
indicates you are only looking at the mixer. There is no point in
doing this unless there is a specific reason. It is much easier
to do a conversion to digital lower in frequency, and even after some
sort of filtering. And I can't see a point of a "digital mixer" unless
you were committed to a digital scheme through the rest of the receiver.

Michael VE2BVW

2006. Re: Homebrewing circuits for HF vs. VHF/UHF/microwave

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 05:35:07 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0203112135.3c381d8@posting.google.com>
Source record: 45648
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

jason_hsu@my-deja.com (Jason Hsu) wrote in message
news:<f7d9a152.0203110757.4243b7f0@posting.google.com>...
> What does it take to homebrew circuits for VHF, UHF, and microwave
> frequencies? From what I understand, the higher the frequency, the
> greater the impact of stray capacitances and inductances as the
> wavelength contracts to the point that it is no longer much larger
> than the electronic components. I guess this is part of the reason
> why there are fewer SWR meters and antenna analyzers commercially
> available for VHF-and-up as compared to HF.
>
> What does it take to overcome the impact of stray capacitances and
> inductances? More careful construction? Stripline? Anything else?
>
You're question is too broad. VHF is considered to start at 30MHz, right next door to HF. It's an arbitrary division. If you are working at 35MHz, or even 50MHz, construction will be almost identical to construction in the HF range. Of course, you can be sloppier at 3MHz than at 30MHz, and as you move upward in frequency, you have to be more careful. At 144MHz, you have to be more careful, but there is no real difference in construction techniques. It's only when you get up into UHF and more so microwave, do you start using radically different construction techniques.

I think over the years, the definition of difficult construction territory has move up in frequency. Forty years ago, you'd see people writing in the ham magazines about how difficult it was to build at 220MHz. But as the higher frequencies became more common, and devices improved, people would only start to say such things when dealing in 432MHz or higher. In the tube era, things were pretty bulk, not just the tubes but the peripheral components. When transistors came along, things became smaller, and the fact that transistors weren't as heavy as tubes and their peripheral components meant that it was easier to make things smaller. Even forty years ago, you'd have to struggle to get good noise figure in a UHF receiver, scrounging some special part and tweaking it. The devices have gotten better, so at the same frequencies less effort is needed to get to the same level.

As for commercial equipment, I don't think difficulty of construction is an issue. Far more people have traditionally been on HF, hence there's a bigger market. Even if there now may be more using VHF than HF, the needs are much simpler. There will be few working on really complicated antenna systems, so the market will be limited on fancy antenna test equipment.

They can give away cellphones if you sign
up for cellphone service, which should be an indication that it's
not all that much trouble to build at VHF and UHF. A cellphone is
much more complicated than antenna test equipment or a simple transmitter,
yet there is no problem in manufacturing them in enough quantities
that they are given away.

Michael VE2BVW

2007. Re: HELP IN OLD QST....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 05:49:12 UTC
From: KC8PMX <kc8pmx@NOSPAMdiamondcs.net>
Message-ID: <a6mcvs3k38@enews1.newsguy.com>
Source record: 45678

Are you wanting scans of any ads from those years? Or the whole magazine?
I do have some of those years I think, and could scan them. Or may be
interested in a sale/trade of them if interested.

Ryan
KC8PMX
"JM CHERRY" <jmc@dproducts.be> wrote in message
news:3c891699$0$33510$ba620e4c@news.skynet.be...
> Hi all,
>
> To complete the R.L. Drake Museum Vitual pages, I Need a copy or 300 dpi
gey
> scanning of the QST Years 1957, 1960, 1962, 1968 and 1968..; PLEASE HELP !
>
> All other years are on Museum pages... This was lot of work for me and all
> the OM's who send me files. thanks to all.
>
> 73,
>
> JM CHERRY
> http://www.dproducts.be
> http://www.dproducts.be/drake_museum
>
>

2008. Need grid-dip reference circuits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 06:16:10 UTC
From: Gollywog <_eng@ilos.net>
Message-ID: <K2hj8.1234$8i2.32461@news2.mts.net>
Source record: 45649

Anybody:

I need a little micro controller circuit to help me tune a bunch of LC networks to resonance. If anyone has seen a public domain project which fits the description below I'd appreciate a pointer. Otherwise I'd appreciate comments on the strategy indicated in the block diagram at:

http://www.ilos.net/~eng/index.html

I want to borrow from the classic grid-dip meter approach and loose couple to a variable frequency oscillator (VFO) then look for a change in signal level as the VFO is swept past the network's resonant frequency. I do not want to use the classic approach of coupling directly to the VFO's main (frequency determining) inductor. I also do not want to use the classic approach of trying to cause a large change (i.e. dip) in the VFO's output level. These last two ideas seem to invite instability.

The distinguishing characteristic here is the use of a second "receiver" coupling loop instead of the classic design approach of monitoring the VFO signal directly. The idea is that the variable gain amplifier driving the "transmitting" loop and the RMS-to-DC converter and error amplifier following the "receiving" loop complete a closed system that attempts to maintain a constant signal level at the "receiver". The ADC connected to the error amplifier output provides the MCU with on demand access to the gain level being used at the VGA. Operation involves an initial "calibration phase" frequency sweep to plot a baseline coupling curve, then the LC network is brought in and subsequent frequency sweeps should show the "dip" (from the energy being coupled into the LC network's losses) as a "bump" in the difference in the drive levels required at the VGA over frequency.

I am especially interested in any public domain work which addresses the math behind introducing the parallel LC network under test into the vicinity of the "transmitter"/"receiver" coupling field. This seems to be beyond the modeling capabilities of EZNEC and I really don't understand 4NEC2 and WIREGRID well enough to even try. Something on stability (i.e. poles and zeros, etc) in a circuit like this (i.e. where everything is converging toward DC), would also be helpful. I don't see the point to adding a ferrite rod, etc at the moment but I'd be interested in any comments w.r.t. the pros and cons.

Thanks,
Mike
va4mgw

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2009. Annoying, persistent, elusive, intermittent QRN problem: help please!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 06:20:20 UTC
From: Will White <googlyelmo@earthlink.net>
Message-ID: <3C8D9E25.FD351C05@earthlink.net>
Source record: 45650

I have a local noise problem I am hoping someone can help me track down. I hear

S-6 or 7 loud, 'coarse' has on all HF bands, on all frequencies, though the intensity of noise diminishes somewhat on higher bands. On 40M, my main band, it is all but intolerable, making QSOs with all but the loudest stations difficult, even at 12 WPM or so.

The noise comes on for exactly 2' 15", and goes off for exactly 1' 25". Over and

over. I have timed it many times over two weeks. The noise is only there after dark. Aha! But I have searched and searched for an intermittent streetlight, to no avail. I have gone about three blocks in all directions from the house in this search, and also looked for automatic driveway/porch lights nearby, but can't find any. What the &*%$ can this be!?? I am really puzzled by the exact timing, since it would seem that a streetlight malfunctioning wouldn't do this, and a driveway light might stay ON for a specific time, but not off! HELP!

--
Will White, KD7BFX
Seattle WA US
King County, Grid CN87tq
ITU Zone 6, CQ Zone 3
****
"The wireless telegraph is not difficult to understand.
The ordinary telegraph is like a very long cat.
You pull the tail in New York, and it meows in Los Angeles.
The wireless is the same, only without the cat."
- Albert Einstein
****

2010. WTB : Icom 720 CW Filter - preferably in VK

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 06:35:15 UTC
From: Doug <doug@ozhelpservices.com>
Message-ID: <Dkhj8.9224$mp.40621@news-server.bigpond.net.au>
Source record: 45651
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Wanted :

Icom 720A 9MHz CW Filter FL-32 or FL-63

Details of dimensions & fitting are available at
http://www.ozhelpservices.com/icom720cwfiltdetailed.jpg

If you can help please email vk4adc@[nospam]ozhelpservices.com after you
have removed the [nospam] from the address.

Thanks

Doug VK4ADC

2011. Re: Annoying, persistent, elusive, intermittent QRN problem: help please!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 07:12:25 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3C8DAA59.DEE56CD@clifto.com>
Source record: 45652

Will White wrote:
> The noise comes on for exactly 2' 15", and goes off for exactly 1' 25".

Fishtank heater in the area?

--
Britney Spears' Guide to Semiconductor Physics
<http://britneyspears.ac/lasers.htm>

2012. Re: Need grid-dip reference circuits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 09:24:08 UTC
From: ritter@ciphersbyNOSPAMritter.com
Message-ID: <3c8dc929.41129793@netnews.att.net>
Source record: 45653

On Tue, 12 Mar 2002 06:16:10 GMT, in
<K2hj8.1234$8i2.32461@news2.mts.net>, in rec.radio.amateur.homebrew
"Gollywog" <_eng@ilos.net> wrote:

>
>Anybody:
>
>I need a little micro controller circuit to help me tune a bunch of LC
>networks to resonance. If anyone has seen a public domain project which fits
>the description below I'd appreciate a pointer. Otherwise I'd appreciate
>comments on the strategy indicated in the block diagram at:
>
>http://www.ilos.net/~eng/index.html
>
>I want to borrow from the classic grid-dip meter approach and loose couple
>to a variable frequency oscillator (VFO) then look for a change in signal
>level as the VFO is swept past the network's resonant frequency. I do not
>want to use the classic approach of coupling directly to the VFO's main
>(frequency determining) inductor. I also do not want to use the classic
>approach of trying to cause a large change (i.e. dip) in the VFO's output
>level. These last two ideas seem to invite instability.
>
> The distinguishing characteristic here is the use of a second "receiver"
>coupling loop instead of the classic design approach of monitoring the VFO
>signal directly. The idea is that the variable gain amplifier driving the
>"transmitting" loop and the RMS-to-DC converter and error amplifier
>following the "receiving" loop complete a closed system that attempts to
>maintain a constant signal level at the "receiver". The ADC connected to the
>error amplifier output provides the MCU with on demand access to the gain
>level being used at the VGA. Operation involves an initial "calibration
>phase" frequency sweep to plot a baseline coupling curve, then the LC
>network is brought in and subsequent frequency sweeps should show the "dip"
>(from the energy being coupled into the LC network's losses) as a "bump" in
>the difference in the drive levels required at the VGA over frequency.
>
> I am especially interested in any public domain work which addresses the
>math behind introducing the parallel LC network under test into the vicinity
>of the "transmitter"/"receiver" coupling field. This seems to be beyond the
>modeling capabilities of EZNEC and I really don't understand 4NEC2 and
>WIREGRID well enough to even try. Something on stability (i.e. poles and
>zeros, etc) in a circuit like this (i.e. where everything is converging
>toward DC), would also be helpful. I don't see the point to adding a ferrite
>rod, etc at the moment but I'd be interested in any comments w.r.t. the pros
>and cons.

>
>Thanks,
>Mike
>va4mgw
>
>********* \\\\lll//// *********
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>*** --oOOOo---(_)---oOOOo-- ***
>

I doubt this will help much, but there was an article in 73 Magazine, probably 1978 or 1979 (there is no date on the pages) by Walter van B. Roberts W2CHO/K4EA. (W2CHO is no longer active, and K4EA is not him.) The title was: "New Life For Your Old Dipper," and he goes through a couple of permutations ending up with:

"It was only after trying to do it the hard way that I suddenly realized that . . . the problem of eliminating direct coupling between transmitter and receiver could be solved by putting electrostatic screening around the transmitter so that it put out only a magnetic field, while the receiver was made to be sensitive only to an electric field."

Terry KF5MH

2013. Re: Homebrewing circuits for HF vs. VHF/UHF/microwave

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 09:39:43 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <suhr8uc3qan5f6e1eq9ko7kivko3aseen8@4ax.com>
Source record: 45654
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On 11 Mar 2002 07:57:30 -0800, jason_hsu@my-deja.com (Jason Hsu)
wrote:

>What does it take to homebrew circuits for VHF, UHF, and microwave
>frequencies? From what I understand, the higher the frequency, the
>greater the impact of stray capacitances and inductances as the
>wavelength contracts to the point that it is no longer much larger
>than the electronic components.

Fortunately, the component size has been reduced over the years from
tubes to discrete transistors and the surface mount components. Since
there is no longer a need to mount leads through the PCB, the stray
inductance can be greatly reduced, thus, more or less traditional
designs can be used well into the UHF range.

>I guess this is part of the reason
>why there are fewer SWR meters and antenna analyzers commercially
>available for VHF-and-up as compared to HF.

On HF, where the feed line losses are quite low, there is not much
interest in tuning the actual antenna, but instead try to resonate the
combination of the antenna itself, the feedline and the antenna tuner
as a single unit. If you measure the complex impedance at the lower
end of the line, it does not tell much about the antenna terminal
complex impedance, unless you know the exact feedline electrical
length in wavelengths for that particular frequency, due to the
impedance transformation of the unmatched feedline.

On VHF/UHF, in which the feedline loss is usually considerable, the
SWR meter will give smaller indications at the low end of the
transmission than at the antenna terminal, so you must know the
feedline losses to compensate for it. Anyway, due to the considerable
feedline loss is, part of the forward as well as reflected power is
dissipated (into heat) in the feedline, thus, it not a good idea to
match the VHF/UHF antenna with an antenna tuner down in the shack. The
proper way is to match the antenna itself, which requires that you are
able to measure the actual impedance at the antenna terminals. Thus, a
proper VHF/UHF antenna analyzer would have an outdoor unit at the
antenna (a directional coupler with rectifiers) and in-house unit for
displaying of the measured values.

>What does it take to overcome the impact of stray capacitances and
>inductances? More careful construction? Stripline? Anything else?

If you are used to working with complex antenna impedances, adapting to micro striplines should not be too hard. Various stubs can be constructed from sections of PCB tracks. The velocity factor of glass fiber boards are about 0.5, so a quarter wave section is about 90 mm at 432 MHz and 30 mm at 1.3 GHz, so it should be quite easy to work with these. At 432 MHz, the dimensions are of course a bit bulky for portable applications.

An low power amplifier with both 50 ohm input and output impedance can be constructed by first making a 50 ohm strip and cutting it into 4 parts with three cuts. Across the first and last cut, install SMD DC blocking capacitors and at the middle cut, install e.g. a MAR-x series MMIC amplifier and a bias resistor to supply the operating current. Install SMA connectors at the ends of the stripline and you have a modular amplifier with 50 ohm input and output impedance.

Paul OH3LWR

2014. Re: Need grid-dip reference circuits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 11:21:50 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c8de487.458667@news.freeserve.net>
Source record: 45655

Have you looked at directional couplers for this?.
--
On Tue, 12 Mar 2002 06:16:10 GMT, "Gollywog" <_eng@ilos.net> wrote:

>
>Anybody:
>
>I need a little micro controller circuit to help me tune a bunch of LC
>networks to resonance. If anyone has seen a public domain project which fits
>the description below I'd appreciate a pointer. Otherwise I'd appreciate
>comments on the strategy indicated in the block diagram at:
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>http://www.ilos.net/~eng/index.html
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>I want to borrow from the classic grid-dip meter approach and loose couple
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>level as the VFO is swept past the network's resonant frequency. I do not
>want to use the classic approach of coupling directly to the VFO's main
>(frequency determining) inductor. I also do not want to use the classic
>approach of trying to cause a large change (i.e. dip) in the VFO's output
>level. These last two ideas seem to invite instability.
>
> The distinguishing characteristic here is the use of a second "receiver"
>coupling loop instead of the classic design approach of monitoring the VFO
>signal directly. The idea is that the variable gain amplifier driving the
>"transmitting" loop and the RMS-to-DC converter and error amplifier
>following the "receiving" loop complete a closed system that attempts to
>maintain a constant signal level at the "receiver". The ADC connected to the
>error amplifier output provides the MCU with on demand access to the gain
>level being used at the VGA. Operation involves an initial "calibration
>phase" frequency sweep to plot a baseline coupling curve, then the LC
>network is brought in and subsequent frequency sweeps should show the "dip"
>(from the energy being coupled into the LC network's losses) as a "bump" in
>the difference in the drive levels required at the VGA over frequency.
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> I am especially interested in any public domain work which addresses the
>math behind introducing the parallel LC network under test into the vicinity
>of the "transmitter"/"receiver" coupling field. This seems to be beyond the
>modeling capabilities of EZNEC and I really don't understand 4NEC2 and
>WIREGRID well enough to even try. Something on stability (i.e. poles and
>zeros, etc) in a circuit like this (i.e. where everything is converging
>toward DC), would also be helpful. I don't see the point to adding a ferrite
>rod, etc at the moment but I'd be interested in any comments w.r.t. the pros
>and cons.

>
>Thanks,
>Mike
>va4mgw
>
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>
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>

2015. Re: motorola Purc 5000 Transmitter VHF and UHF???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 13:17:13 UTC
From: Graham Jones <gkj@airmail.net>
Message-ID: <1D2979BF3F767952.20B74311D0BB0653.CFA70F493EBEED89@lp.airnews.net>
Source record: 45656

Greetings,

No affiliation with this entity!

http://www.brinkleyelectronics.com/prog/mot/msfprog.htm

Graham

"Noel" <notthisone@nothere.com> wrote in message
news:pjkd8.66191$dG.27205514@news1.rdc1.sdca.home.com...
> I have the chance to get a vhf and uhf purc 5000 motorola transmitters for
> my use and I like to put them on the hamband. Have any links for these ?
I
> need the chart on the prom chip for the control board to program the tx
> freq.
>
> Noel Hampton
> kb5csn@cox.net
>
>
>

2016. Re: Homebrewing circuits for HF vs. VHF/UHF/microwave

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 13:31:03 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.com>
Message-ID: <FBCXJTDXMgj8EAgs@ifwtech.com>
Source record: 45657
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

John Miles wrote:

> Modularize everything (SMA jacks and the Hammond 1590-series boxes are
>your friends). And watch out for ground loops

Grounding is a potential problem with diecast boxes because the edges of the board cannot be effectively grounded to the box [1]. Often there are multiple ground paths through the ground lugs of coax connectors and the metal mounting pillars.

Why not mount the board flat down on the base of the box? Because it's generally good VHF/UHF/microwave practice to keep the RF and DC components on opposite sides of the board, using feedthrough capacitors to provide DC power to the RF side. If you don't have access to the back of the board, you have to take much more care to keep RF out of the DC wiring.

Much better are the tinplate boxes we can get in Europe, which have removable top and bottom lids. The PC board is cut to size and mounted part-way up the walls, so you can easily get to both sides. The groundplane is soldered all round the walls so that grounding is excellent. RF connectors come straight through the walls and onto the board, with zero lead length.

The boxes are available in a wide range of sizes to suit various kinds of RF modules, and are mostly made by a small German firm called Otto Schubert GmbH. I don't know if these boxes are imported into the USA, but most European VHFers wouldn't use anything else.

[1] If you really have to, you can bolt a large number of bent-over solder lugs to the box, and solder them directly to the groundplane of the board... that will work, but it's better to avoid it.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.com/g3sek

2017. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 16:44:03 UTC
From: fcompagne@nordnet.fr
Message-ID: <b09da2de.0203120844.5898bfc@posting.google.com>
Source record: 45658
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

see http://www.navtec.de/personen/acf/dd/dd_inh.htm alas in german.

But should make a fine VOR/LOC.

"red rover" <natpress@sympatico.ca> wrote in message
news:<2gfj8.12964$Yg2.1145215@news20.bellglobal.com>...
> Well there are several ways to handle this.
> You have to do some analysis and tradeoffs.
>
>
> Read something like this...
> http://www.intersil.com/data/an/an9/an9509/an9509.pdf
> and this.....
> http://www.analog.com/productSelection/pdf/AD6620_a.pdf
> and this
> http://www.hunteng.co.uk/solutions/digitalradio_sol.htm
> and this
> http://www.ece.jcu.edu.au/eric/thesis/DigitalRx/txdr01specs.htm
>
> to get your mind thinking of other ways of doing it. The bandwidth
> (not the frequency) you have to handle is small and contains little
> data. That makes somethings easier. Many ADCs are now spec'd
> for IF use. In the old days (> 5years ago say) they assumed Nyquist
> sampling and often didn't spec. analog bandwidth beyond 1/2 the max
> sampling rate (or they deliberately limited it to reduce noise). Now they
> realize people are using it for downconversion.
>
> Look a this datasheet
> http://focus.ti.com/docs/prod/productfolder.jhtml?genericPartNumber=ADS2807
> 50MHz sample rate but an analog bandwidth of 270MHz.
>
> You only need to use your the DDS to span the tuning range which in
> your case has a 15MHz span (325-340MHz). You could put a fixed
> downcovertor in the path and use a DDS to tune in the final frequency
> that the ADC will do the final fixed downconversion on. Or you could
> vary the ADC clock. There are also digital mixers so you mix it after
> it is digitized.
>
> I use to design cable modems that ran up to 750MHz and with a DDS
> that couldn't clock higher than 50MHz. Which reminds me, the frequencies
> you are using are in the Cable TV band. You could whack down a dirt
> cheap digitally programmable TV tuner to pull the data down to a frequency
> the DDS could use. But be careful of microphonics. The vibration of TV
> tuners can through off the tuning (could be OK in this application) and I

> expect planes to vibrate alot.
>
> Steve
>
>
> Jim Weir wrote in message ...
> >
> >"red rover" <natpress@sympatico.ca> wrote in message
> >news:YwWi8.10323$Yg2.679669@news20.bellglobal.com...
> >> Well a DDS like the ADI AD98xx series could be
> >>
> >> http://www.analog.com/productSelection/pdf/ad9830.pdf
> >>
> >> be a digitally programmable mixer letting you precisely
> >> pick the frequency in 108-112 MHz range or the
> >> 325- 340 MHz range with great precision.
> >
> >Except that this part, and indeed most parts of this genre have an upper
> >frequency limit of 50 MHz.. I did a pretty thorough job of scanning the
> >data sheet for tricks to get it to operate up in the 100 and 300 MHz.
> region
> >and didn't meet with much success.
> >
> >
> >
> >
> >>
> >> Now you can mix this down to DC or use another DSP
> >> trick of sub-sampling which John refered to as
> >> "direct IF sub-Nyquist digitizing". In this case you use the
> >> ADC as another mixer.
> >
> >And you still run into the fact that the frequency of interest is well out
> >of DSP current capability, at least the way I read things.
> >
> >
> >>
> >> Now, after mixing down you could look for the 90Hz and 150Hz using
> >> an FFT. An example would be running a 64 point FFT with a bandwidth
> >> of 240Hz. You sample at 480Hz (twice the highest frequency) and then
> >> every bin (frequency) is 3.75Hz apart. The 24th frequency is exactly 90Hz
> >> and the 40th is exactly 150Hz.
> >
> >And I'm trying to understand how you get the amplitude component out of an
> >FFT after you do the messing around to select the proper frequency
> >component.
> >
> >
> >>
> >> The name of the game is trade off the precision caps/resistors (which

> never
> >> really drop in price much) and have accuracy in the 1, 2 and 5% ranges
> for
> >> digital processing (which continuosly gets cheaper and better).
> >
> >That's why we design in at least one variable component. Yes, they age,
> and
> >yes, they need occasional calibration, but a 2 cent 5% capacitor still
> isn't
> >anywhere near the digital processing cost.
> >
> >
> >
> >
> >>
> >> Many DSP's have almost all the functions you need built-in. They have
> ADCs,
> >> DACs,
> >> GPIO etc. It could do the FFT, the AGC, drive your audio out, do the
> tuning,
> >> drive
> >> the display etc.
> >
> >And I'm still trying to search the literature to find one that will work in
> >VHF. Any suggestions?
> >
> >Jim
> >
> >
> >

2018. Re: WANTED: how to homebrew a better SWR noise bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 17:52:28 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <o4gs8u8ep3pd4l9feei3unn6ouvtanrflg@4ax.com>
Source record: 45659
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On 11 Mar 2002 14:14:04 -0800, jason_hsu@my-deja.com (Jason Hsu)
wrote:

>Richard Clark <kb7qhc@attbi.com> wrote in message
news:<jqpp8us6canh75nbmn9v28ob9umi93ulv8@4ax.com>...
>>
>> Turn off AGC/AVC.
>>
>What is AGC/AVC? (I'm not even sure if my radio has it.)

Automatic Gain/Volume Control. When engaged, it compresses the audio
volume range of signals received so that weak performers and
powerhouses sound nearly the same. This answers your complaint of the
tepid response to otherwise serious change in levels, but is unlikely
to satisfy. Keep the AGC on and observe the S-Meter instead (the
S-Meter is a direct reading of AGC potential in many sets).

>
>> >I want my homebrewed SWR noise bridge to have its own speaker, which I
>> >guess would be less sensitive and would be driven by the SWR ratio and
>> >NOT connected to the antenna or transmission line. An alternative is
>> >to use a series of light bars/LEDs, analog meters, or a digital
>> >display to show the SWR.
>>
>> This goes wholly beyond the scope of the instrument; this is the
>> source, after-all, not the load.
>>
>OK, I can see that a white noise generator wouldn't work here. I
>guess some type of miniature signal generator (with a knob or other
>control on the device) is needed to ensure transmission at just one
>frequency.

Nope, not at all. The white noise generator is perfectly suited -
that is the point of the "noise" in Noise Bridge. It is a source,
nothing else, the remainder of your system already presents the
necessary bridge configuration.

>
snip
>> on. The white noise source on the other hand provides a fixed level
>> signal at ALL frequencies that is usually greater than over the air
>> signal levels.
>>
>The white noise signal isn't always much greater than over-the-air
>signals. The over-the-air signals can be significant on 40m and 80m

>at night. And while my radio does have an attenuator, this affects
>the white noise AND the on-air noise.

Hi Jason,

And as well it should. This suggests you would feel better with a higher amplitude white noise source. As I said, designing and building a linear amp will test your self challenge. It is not such a difficult first assignment, and neither is it a brush-off.

73's
Richard Clark, KB7QHC

2019. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 18:00:24 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u8sghhf5trpdf5@corp.supernews.com>
Source record: 45660
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

"red rover" <natpress@sympatico.ca> wrote in message
news:2gfj8.12964$Yg2.1145215@news20.bellglobal.com...
> Well there are several ways to handle this.
> You have to do some analysis and tradeoffs.

And my analysis says, after a full morning of reading this stuff that the
BEST I could hope to get to was an outer edge of 70 MHz. in one of the
parts.

>
>
> Read something like this...
> http://www.intersil.com/data/an/an9/an9509/an9509.pdf

Dead link.

> and this.....
> http://www.analog.com/productSelection/pdf/AD6620_a.pdf

Max 54 MHz.

> and this
> http://www.hunteng.co.uk/solutions/digitalradio_sol.htm

Tons of blather without a single hard data point.

> and this
> http://www.ece.jcu.edu.au/eric/thesis/DigitalRx/txdr01specs.htm

70 Mhz. if you are lucky.

>
> to get your mind thinking of other ways of doing it. The bandwidth
> (not the frequency) you have to handle is small and contains little
> data. That makes somethings easier. Many ADCs are now spec'd
> for IF use. In the old days (> 5years ago say) they assumed Nyquist
> sampling and often didn't spec. analog bandwidth beyond 1/2 the max
> sampling rate (or they deliberately limited it to reduce noise). Now they
> realize people are using it for downconversion.
>
> Look a this datasheet
>
http://focus.ti.com/docs/prod/productfolder.jhtml?genericPartNumber=ADS2807
> 50MHz sample rate but an analog bandwidth of 270MHz.

I'm getting to believe that the digital weenies really don't have a handle
on RF matters.

Jim

2020. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 18:14:17 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <i9hs8u4o9ub8ok8se7iflnd70l55l3vvii@4ax.com>
Source record: 45661
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

On Mon, 11 Mar 2002 19:12:58 +0000, John Woodgate
<jmw@jmwa.demon.co.uk> wrote:

>Cross-modulation could be a serious problem indeed. But a low-gain r.f.
>stage with *input* tuned circuits for both frequency bands would be a
>feasible solution.

Shucks, if you're going to do that, why not just spring for a extra
mixer and LO and be done with it...

Jake Brodsky, mailto:frussle@erols.com
"Nearly fifty percent of all graduates came from
the bottom half of the class."

2021. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 18:18:11 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <21hs8ucuk9ppbt8pm7oj83gassasnufuc1@4ax.com>
Source record: 45662
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

On Tue, 12 Mar 2002 10:00:24 -0800, "Jim Weir" <jim@rst-engr.com> wrote:
>"red rover" <natpress@sympatico.ca> wrote in message
>> to get your mind thinking of other ways of doing it. The bandwidth
>> (not the frequency) you have to handle is small and contains little
>> data. That makes somethings easier. Many ADCs are now spec'd
>> for IF use. In the old days (> 5years ago say) they assumed Nyquist
>> sampling and often didn't spec. analog bandwidth beyond 1/2 the max
>> sampling rate (or they deliberately limited it to reduce noise). Now they
>> realize people are using it for downconversion.
>>
>> Look a this datasheet
>>
>http://focus.ti.com/docs/prod/productfolder.jhtml?genericPartNumber=ADS2807
>> 50MHz sample rate but an analog bandwidth of 270MHz.
>
>I'm getting to believe that the digital weenies really don't have a handle
>on RF matters.

Perhaps it is the other way round. :-)

You don't seem to be grasping that the part only has to sample at a rate
of at least 2x the *bandwidth* of the desired signal modulation. You don't
have to sample at a multiple of the *frequency* of the transmission. This
sort of sub-Nyquist sampling automatically does a downconversion to
baseband via the well known aliasing phenomena. The only caveat is
that the analog part of the A/D has to be able to work at the transmission
frequency of interest. For the above quoted part, that's an upper limit of
270 MHz. So this part will work fine in a 70 MHz IF.

Gary

2022. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 18:22:11 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u8shqb59pkgm6f@corp.supernews.com>
Source record: 45663
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

That is a wonderful site for explaining how the system works, but has not a thing to do with methods of designing the receiver.

Jim

"Francois" <fcompagne@nordnet.fr> wrote in message news:b09da2de.0203120844.5898bfc@posting.google.com...
> see http://www.navtec.de/personen/acf/dd/dd_inh.htm alas in german.
>
> But should make a fine VOR/LOC.
>

2023. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 18:33:01 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u8sieicq1pac3f@corp.supernews.com>
Source record: 45664
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

> Perhaps it is the other way round. :-)

Perhaps. Or more likely, we speak different languages to describe the same phenomenon.

>
> You don't seem to be grasping that the part only has to sample at a rate
> of at least 2x the *bandwidth* of the desired signal modulation.

Yessir, I grasp that.

You don't
> have to sample at a multiple of the *frequency* of the transmission.

Yessir, I understand that too.

This
> sort of sub-Nyquist sampling automatically does a downconversion to
> baseband via the well known aliasing phenomena.

It is only well known if you've done it before. There is a well-known phenomena that a 6U8 will burn out in a couple of hundred hours if you run the tuner shield up on it, but I doubt todays kids coming out of college would call it "well known" even thought they could run Nyquist loops around me.

The only caveat is
> that the analog part of the A/D has to be able to work at the transmission
> frequency of interest. For the above quoted part, that's an upper limit of
> 270 MHz.

And I went around and around with the data sheet HOPING to find something like that and couldn't find it after an hour of searching. Can you give me a pointer to a page on the data sheet?

So this part will work fine in a 70 MHz IF.

So the original poster assumed a 70 MHz. IF? I never picked up on that. So the drill of downconversion to 70 is still viable? That's fine. Now I come down to some words in the data sheets and appnotes that say something like the sampling will convert the data to baseband. That's a hell of a note to try and understand how a 150 Hz. signal, which can have a possible 8 kHz. error when downconverted to 70 MHz. IF can be found without a lot of scratching around. Understand? The digital stuff appears to require the data in the middle of the passband, and with an analog downconversion I can't promise that without a tremendous amount of stabilization...and even then I don't think I can promise to exactly center the data in the IF

passband.

Jim

2024. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 18:34:05 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u8sighs3uv7956@corp.supernews.com>
Source record: 45665
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

Real estate.

Jim

"> >Cross-modulation could be a serious problem indeed. But a low-gain r.f.
> >stage with *input* tuned circuits for both frequency bands would be a
> >feasible solution.
>
> Shucks, if you're going to do that, why not just spring for a extra
> mixer and LO and be done with it...

2025. Re: WTB 30KV Hi E wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 18:41:08 UTC
From: Paul <paul@btinternet.com>
Message-ID: <XxxlKFCZtkj8Ewwx@btinternet.com>
Source record: 45666

Another alternative is vehicle Ignition cable , which is designed for
the job.

Paul

In message <Q9i08uoamk0qeqcc7g0qfa9d01j1scf7md@4ax.com>, Jim Adney
<jadney@vwtype3.org> writes
>Paul Cooper <plcooper@starband.net> wrote:
>
>>WTB 2 lengths of 30KV Hi Voltage wire with surface smooth (nylon). One
>>length in red and one in black. Both lengths to be around 50 feet.
>
>If you are wanting to run a pair of high voltage wires you can use
>RG-8 coax as long as it has the SOLID (NOT foam) dielectric. If you're
>running one ground and one HV you just need one length of cable. If
>one is + HV and the other is - HV, then use 2 lengths of RG-8.
>
>In most installations, the shield is a welcome addition to safety,
>convenience, and voltage standoff.
>
>-
>--
> Jim Adney jadney@vwtype3.org
> Madison,Wisconsin USA
>--

--

2026. Re: MFJ 259 Fault

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 20:16:25 UTC
From: Jerry Oxendine <joxendi@bellsouth.net>
Message-ID: <Gttj8.48579$Yd.2780806@e3500-atl1.usenetserver.com>
Source record: 45668

Hmm, I can't say that. I have 2 of them. The first one died about 3 years ago, I sent it back
to MFJ, and they returned it in slightly over a week and it has worked since. I have gotten good service from mine. I don't know what I'd do without them. One stays in the car semi-
permanently as a screwdriver "tuner". Lets me resonate the antenna without undue stress on
the finals.

Jerry
K4KWH
Bob <bob@m0kkw.freeserve.co.uk> wrote in message
news:a6jq0a$o6p$1@news5.svr.pol.co.uk...
> My 259 analyser has packed up, just reading zeros in the analyser mode
> although the counter seems to be working. Looks like the oscillator has
> stopped. Has anyone else seen this fault, or even fixed it? MFJ service
non
> existent, won't be buying any more of this rubbish having seen inside it!
>
> 73 Bob M0KKW
>
>

2027. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 20:30:55 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <cE5Sn9A$Vmj8EwS3@jmwa.demon.co.uk>
Source record: 45670
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that Jim Weir <jim@rst-engr.com> wrote
(in <u8sieicq1pac3f@corp.supernews.com>) about 'Unusual AM Receiver
Design', on Tue, 12 Mar 2002:

>a 6U8 will burn out in a couple of hundred hours if you run
>the tuner shield up on it,

Oh, *that's* what's causing it! (;-)
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

2028. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 20:31:48 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <A07VLBB0Wmj8Ewyf@jmwa.demon.co.uk>
Source record: 45669
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that Jake Brodsky <frussle@erols.com>
wrote (in <i9hs8u4o9ub8ok8se7iflnd70l55l3vvii@4ax.com>) about 'Unusual
AM Receiver Design', on Tue, 12 Mar 2002:
>On Mon, 11 Mar 2002 19:12:58 +0000, John Woodgate
><jmw@jmwa.demon.co.uk> wrote:
>
>>Cross-modulation could be a serious problem indeed. But a low-gain r.f.
>>stage with *input* tuned circuits for both frequency bands would be a
>>feasible solution.
>
>Shucks, if you're going to do that, why not just spring for a extra
>mixer and LO and be done with it...
>
One r.f amp versus an extra mixer and LO?
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

2029. Re: Digital Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 20:33:33 UTC
From: k7itm@aol.com
Message-ID: <3200347.0203121233.2b67a3ab@posting.google.com>
Source record: 45667

Well, you could do it with just a single bit digitization (and therefore lots of noise), but since you can buy digital mixers that work on lots more bits and at reasonably high frequencies, why bother? Analog Devices and TI and some others sell digital downconverter (and upconverter) chips. To digitize the input, have a look at the Analog Devices AD6645, for example. TI has some ADCs that are almost as interesting for digital receiver work. Once you get the signal digitized, you can build the rest of the radio digitally. (We do that where I work...there are some very significant advantages, especially for some customers.) It's quite possible to do the mixing and filtering with an FPGA, too...even the Xilinx Spartan II series could do a respectable job over the HF range if you're careful, and for sure you could do a lot with the Virtex II FPGAs, and I suppose similar things from other vendors. If you don't need video bandwidths, you'd do well to quickly decimate down to slower sample rates, which you could then reasonably handle in a DSP.

Interesting to contemplate: if you set up your ADC for, say, 500mV p-p full scale input at the antenna terminals and it's a 14-bit converter, how small a signal can you detect? What limits the minimum detectable signal?

Cheers,
Tom

Gary Morton <gary@alma.demon.co.uk> wrote in message news:<3C8D3622.1B89566F@alma.demon.co.uk>...
> Just a thought.
>
> I was wondering whether it is possible to build a superhet type receiver
> but using a digital mixer for the LO and incoming signal, i.e. an XOR
> gate. I can get hold of a fairly useful programmable PLL chip from work
> which should work as a suitable LO, although it may need a bit of
> dividing down.
>
> Is there a way to get the input signal into a suitable digital form?
> Will the XOR mixer work?
> What do you do with the resulting signal?
>
> regards...
>
> --Gary

2030. Hints & Kinks article needed for Swan

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 21:11:30 UTC
From: George Curtis <gdcurtis@attbi.com>
Message-ID: <6auj8.29171$uA5.33042@rwcrnsc51.ops.asp.att.net>
Source record: 45671

Anyone have a copy of the Swan conversion from 6Hf5's to 8950's (or visa versa).

Thanks,

George

2031. Re: Annoying, persistent, elusive, intermittent QRN problem: help please!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 22:16:47 UTC
From: Dick Carroll <dickc58@worldnet.att.net>
Message-ID: <3C87E513.6AEAC3EB@worldnet.att.net>
Source record: 45672

Will White wrote:

> I have a local noise problem I am hoping someone can help me track down. I hear
>
> S-6 or 7 loud, 'coarse' has on all HF bands, on all frequencies, though the
> intensity of noise diminishes somewhat on higher bands. On 40M, my main band,
> it is all but intolerable, making QSOs with all but the loudest stations
> difficult, even at 12 WPM or so.
>
> The noise comes on for exactly 2' 15", and goes off for exactly 1' 25". Over and
>
> over. I have timed it many times over two weeks. The noise is only there after
> dark. Aha! But I have searched and searched for an intermittent streetlight, to
> no avail. I have gone about three blocks in all directions from the house in
> this search, and also looked for automatic driveway/porch lights nearby, but
> can't find any. What the &*%$ can this be!?? I am really puzzled by the exact
> timing, since it would seem that a streetlight malfunctioning wouldn't do this,
> and a driveway light might stay ON for a specific time, but not off! HELP!

You need to pinpoint the noise source with a portable receiver that picks it up
well.
Could be anything from a light dimmer, fish tank heater, touch lamp, outdoor night
light, electronic timer on a household appliance such as a microwave oven, on and
on.
First you need to localize the source so that you
can start shutting off power to the potential sources- homes, business, power
pole, etc.
No exact path can be stated until the source is better localized. You may need to
get utility
company people involved to shut off power to homes etc, to either pinpoint or
eliminate them as the host to the source. You'll be lucky if the source turns out to
be an appliance that you can locate without it.

I was once contacted by utility workers looking for a noise source that was wiping
out most everything including cable TV in a neighborhood. With a portable AM
receiver I soon localized the noise to a power pole that held a large transformer
which fed several homes. I told the utility crew to start unhooking power to the
homes. When they pulled the electric meter on the third home, the noise on my radio
stopped. I had them reattach the meter, and the noise started again. So we went to
the door of that house and pushed the doorbell button. At that instant the noise
stopped, then started again when the button was released. Viola! Arcing doorbell
transformer, was the diagnosis. The utility crew soon had the culprit in hand, and
it was an overheated black glob of tar which had been covered in blown-in attic
insulation. No more radio noise.
You get the drift, it's not an exact procedure, but one leads wherever, a process

of elimination. Noise can move along utility primary lines for miles. Another case I know of
was solved by a cable TV tech who had searched in vain for months for the source, and finally found it by doing a nighttime check of junctions where the HV primary feed split to feed smaller elements of the grid. One of the split-bolt connectors was loose and arcing. Eventually this often burns through the high tension cable and causes a power outage, and utility companies like to fix them first. Any noise that travels for distances instead of being more localized is likely to be traveling on the primary line side of the pole transformer(s).

If you find that the utility company equipment or lines are involved and they balk at helping or move very slowly as they can be prone to do, contact the ARRL for more information on how to proceed. It may be impossible to pinpoint the noise source without their help, as seen above. QST not long ago had a piece noting that FCC had written a utility company when they had failed to clear up radio noise, and it got them moving post haste

Also, ARRL has lots of experience and expertise at RFI solutions and you might find something helpful on their website or via an email to HQ.

Dick W0EX.

2032. Re: Homebrewing circuits for HF vs. VHF/UHF/microwave

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 22:35:58 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C8E830E.2919@pop.removethistomailme.net>
Source record: 45673
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Ian White, G3SEK wrote:
>
> [1] If you really have to, you can bolt a large number of bent-over
> solder lugs to the box, and solder them directly to the groundplane of
> the board... that will work, but it's better to avoid it.
>

Or just drill screw holes every few inches when you mount the board in
the bottom of the chassis. In practice, I usually find that 6-8 around
the periphery of a 4x2 board is fine. The screws, plus the grounding
lugs of any SMA jacks and feedthrough caps you're using, will generally
be enough.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2033. Re: Need grid-dip reference circuits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 22:40:39 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C8E8426.215@pop.removethistomailme.net>
Source record: 45674

Gollywog wrote:
>
> Anybody:
>
> I need a little micro controller circuit to help me tune a bunch of LC
> networks to resonance.

Sounds like a complicated approach to a very simple problem. I haven't even plugged in my grid-dip meter since I built the LC Meter IIB kit from http://www.aade.com. It excels at measuring very small (down to a few nH if you're careful) inductances, so you can tune the circuit right the first time.

Multisection LC filters made with coils tuned by the AADE meter invariably work great with no tweaking.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2034. Re: Hints & Kinks article needed for Swan

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-12 23:27:08 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <89wj8.12392$ao1.324453432@news.inreach.com>
Source record: 45675

George:

I do.

Roger K6XQ

2035. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 02:37:12 UTC
From: red rover <natpress@sympatico.ca>
Message-ID: <wWyj8.47409$4E4.5791148@news20.bellglobal.com>
Source record: 45676
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

Correct Gary.

If you designed a 70MHz IF you'd be in great shape.
The signal bandwidth is very low (a few hundred Hertz)
so the only problem is getting the signal down to something
the ADC can handle. I haven't looked at how DDS can go
but I believe 200MHz clocked DDS are readily available.
But you're probably better off with a cheaper DDS and using
the ADC to perform the downconversion.

I don't know what the problem with this link is
http://www.intersil.com/data/an/an9/an9509/an9509.pdf
I grabbed it just before posting and just visited it without
any problems.

As I implied, this is really to familiarize you with what
can be done in the digital domain rather than give you an
exact solution. Having spent the majority of my career as
an analog weenie (and sensing that you are and analog
guy) I thought you might want some background reading
in order to sort thinking of different circuit topologies.

What sort of volumes and product road map are you looking
at? If you only need a low volume of units or can't see the
potential design re-use then maybe embarking down the
DSP path is more trouble than it's worth. But I consider myself
to be more analog than digital and I see many merits with this
approach.

Steve

>>> Look a this datasheet
>>>
>>http://focus.ti.com/docs/prod/productfolder.jhtml?genericPartNumber=ADS280
7
>>> 50MHz sample rate but an analog bandwidth of 270MHz.
>>
>>I'm getting to believe that the digital weenies really don't have a handle
>>on RF matters.
>
>Perhaps it is the other way round. :-)
>
>You don't seem to be grasping that the part only has to sample at a rate
>of at least 2x the *bandwidth* of the desired signal modulation. You don't
>have to sample at a multiple of the *frequency* of the transmission. This

>sort of sub-Nyquist sampling automatically does a downconversion to
>baseband via the well known aliasing phenomena. The only caveat is
>that the analog part of the A/D has to be able to work at the transmission
>frequency of interest. For the above quoted part, that's an upper limit of
>270 MHz. So this part will work fine in a 70 MHz IF.
>
>Gary
>

2036. GENERAL ELECTRIC Power Transformer for 200-300 Watt Solid State Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 02:43:39 UTC
From: mnowlen@yahoo.com
Message-ID: <3c8ebc73.358299958@news.va.comcast.giganews.com>
Source record: 45677
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.components,rec.audio.marketplace

GENERAL ELECTRIC TF4RX02NA Power Transformer

Has four seperate 32 volt @ 4 Amp windings. Connect in series for 128
Volts or +/- 64 Volts Center Tapped. Primary tapped for 109,
115,120,126, and 132 Volts. Potted in military style case with
terminals. Weight: 20 Lbs. Great for 200-300 Watt Solid State Amp.

Picture at:
http://mywebpages.comcast.net/mnowlen/ge-power-trans.jpg

Very Good Condition, Tested and working.
Two available.
$50 each + Shipping
Send zip code for estimate

Please reply via e-mail or telephone

Thanks for reading.

Mike Nowlen
mnowlen@yahoo.com
(703) 716-1363

2037. FS: Antique RCA Tube Manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 04:50:51 UTC
From: rlucch2098@aol.com
Message-ID: <20020312235051.05840.00000804@mb-bk.aol.com>
Source record: 45679

Hi All;
I found another RCA handbook in my closet :-)
This one is a HB-3, Volume 5-6.
From around 1952, I have'nt "picked" it apart but it appears to cover tubes
from the 30's to 50's. Like 6A3 to 117Z6GT/G, etc.
Real nice for it age.
Here are a few pics>>
http://www.baltimorepress.com/~wa2rqy/rcabook-1.jpg
http://www.baltimorepress.com/~wa2rqy/rcabook-2.jpg
Price is $33.00 Shipped.

Thanks es 73....Rich WA2RQY (1961)
WA2RQY's "confusion Radio" Web-Page
Http://members.aol.com/rlucch2098/index.html
RLUCCH2098@aol.com
"Keep those heaters on" >>

2038. FS: BC-312 Rcvr

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 05:31:39 UTC
From: Walter Treftz <penguino@atlantic.net>
Message-ID: <3C8EE43B.BE403DAB@atlantic.net>
Source record: 45680

FS: WWII Military BC-312M comm rcvr. 1.5-18 mc. The ground version of
the BC-348.
Very good condx. Virgin (no mods), probably some original tubes as are
"VT-" types.
Works but would assume a mess of resistors/caps would need replacement
as they
are originals. From an estate. Built-in 110 VAC supply (-not homebrew)
Missing fuse
holder and SPST toggle sw on rear of chassis. Includes schematic & parts
list.
$150 plus shipping from north-central Florida.
Walt (N4GL) --- penguino@atlantic.net ---
(352) 637-1755

2039. WTB Air Variables

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 07:46:42 UTC
From: Byron Tatum <bjtatum@ev1.net>
Message-ID: <3c8f03c9_1@newsa.ev1.net>
Source record: 45681

Hello- Need these air variables for a receiver project :
National UM-50 or equiv. qty. 4
" UM-100 " " qty. 2
Also, need JW Miller 455 Khz, IF transf. of 912 or 612 series and Rf coils
B-727, B-727C, S-27 shields.
Thanks, WA5THJ.

2040. Do they still brew?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 08:14:37 UTC
From: C&#65533;dric <info@guichaoua.fr.st>
Message-ID: <3c8f0b4a$0$27025$7a628cd7@news.club-internet.fr>
Source record: 45682

Somebody could say to me if these beers are always brewed:

1_"Abbaye d'aulne" .....De Smet Brewery
2_"Leffe vieille cuv&#65533;e" .....Interbrew Brewery
3_"Septante 5" .....Grande brasserie moderne
4_"Alexander" .....Rodenbach
5_"Aerts 1900" .....Haacht Brewery
6_"Elephant" .....Carlsberg
7_"Tuborg dore" .....Tuborg Brewery

2041. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 10:09:12 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <tu7u8ust194bskcvo9vtck3b68fse6c5a9@4ax.com>
Source record: 45683
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

On Tue, 12 Mar 2002 10:33:01 -0800, "Jim Weir" <jim@rst-engr.com> wrote:
>> Perhaps it is the other way round. :-)
>
>Perhaps. Or more likely, we speak different languages to describe the same
>phenomenon.

Oh, I can speak analog tube language too. :-)
I've had to have a foot in both camps in my business,
which uses technologies from the late 1940s all the
way up to the hottest of today's stuff.

I don't necessarily have to know how to design it, but I
do have to know how to troubleshoot and fix it. The best
way to do that is to try to understand the theory behind
the particular technologies. It is a never ending battle to
keep up.

Let me amend that. Understanding the theory may not
always be the *fastest* way to fix today's technologies.
Board level substitution seems to hold that honor. But
I'm old fashioned enough to want to dig deeper than
that.

>> The only caveat is
>> that the analog part of the A/D has to be able to work at the transmission
>> frequency of interest. For the above quoted part, that's an upper limit of
>> 270 MHz.
>
>And I went around and around with the data sheet HOPING to find something
>like that and couldn't find it after an hour of searching. Can you give me
>a pointer to a page on the data sheet?

It is right there on the first page of the web link. "Analog Input BW (MHz) 270"

>> So this part will work fine in a 70 MHz IF.
>
>So the original poster assumed a 70 MHz. IF? I never picked up on that. So
>the drill of downconversion to 70 is still viable? That's fine. Now I come
>down to some words in the data sheets and appnotes that say something like
>the sampling will convert the data to baseband. That's a hell of a note to
>try and understand how a 150 Hz. signal, which can have a possible 8 kHz.
>error when downconverted to 70 MHz. IF can be found without a lot of
>scratching around. Understand? The digital stuff appears to require the
>data in the middle of the passband, and with an analog downconversion I
>can't promise that without a tremendous amount of stabilization...and even

>then I don't think I can promise to exactly center the data in the IF
>passband.

It doesn't have to be exactly centered. But if you expect it won't be, you need to use a sampling rate of at least twice the bandwidth of the 70 MHz IF rather than just twice the bandwidth of the signal modulation. (That's still just low kilohertz.) Then you can numerically tune the digitized result to find the signal and lock onto it. (Digital AFC is really pretty trivial to implement, just use an auto-correlator algorithm to steer it.)

Gary

2042. swap new 3-500z for 4-250

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 11:33:05 UTC
From: Philip Lawrence <hitriode@iinet.net.au>
Message-ID: <3C8F38F0.97C877CC@iinet.net.au>
Source record: 45684

```
swap new 3-500Z for 4-250
Phil
```

2043. Re: Do they still brew?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 13:34:27 UTC
From: Val <nishikeit@zilch.com>
Message-ID: <3C8F5563.D258E71F@zilch.com>
Source record: 45686

Amateur radio home"brew" :-))))))

"Cï¿½dric" wrote:
>
> Somebody could say to me if these beers are always brewed:
>
> 1_"Abbaye d'aulne" ....De Smet Brewery
No idea

> 2_"Leffe vieille cuvï¿½e" ....Interbrew Brewery
No idea

> 3_"Septante 5" ....Grande brasserie moderne
No idea

> 4_"Alexander" ....Rodenbach
No idea

> 5_"Aerts 1900" ....Haacht Brewery
No idea

> 6_"Elephant" ....Carlsberg
YES!

> 7_"Tuborg dore" ....Tuborg Brewery

What is this in Danish?
The following beers are presently brewed at Tuborg brewery:
Groen (green label); Classic, Roed (red label); Guld (golden label);
Tuborg FF;
Paasekbryg "KylleKylle" (Easter beer); Julebryg (Christmas beer) and
some special
and "light" (yuc!) products. AFAIK Tuborg FF is the most alcohol-strong.
And, they are ALL good modulation-waters, but not made according to
"Reinheitsgebot"

2044. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 13:34:33 UTC
From: k7mem@myrealbox.com
Message-ID: <270a577d.0203130534.4044d83c@posting.google.com>
Source record: 45685
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

"Jim Weir" <jim@rst-engr.com> wrote in message news:<u8sieicq1pac3f@corp.supernews.com>...
>
> The only caveat is
> > that the analog part of the A/D has to be able to work at the transmission
> > frequency of interest. For the above quoted part, that's an upper limit of
> > 270 MHz.
>
> And I went around and around with the data sheet HOPING to find something
> like that and couldn't find it after an hour of searching. Can you give me
> a pointer to a page on the data sheet?

It is on the first page of the web link provided and on page 2 of the
data sheet. Look under:

Electrical Characteristics --> Analog Input --> Analog Input Bandwidth

--
Martin E. Meserve, K7MEM

I respond to news groups and E-Mail on my own time and therefore
my responses may not be as timely as you, or I, would like them to
be. If I seem to be ignoring you, send me another E-Mail to jog my
memory. Opinions are my own and do not reflect the opinions of my
employer.

2045. Re: Do they still brew?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 13:55:02 UTC
From: Peter O <peter.o@lennik.org>
Message-ID: <3C8F5A36.90E6DA33@lennik.org>
Source record: 45687

This newsgroup is about building radio-equipment by amateurs.
This is also called homebrewing.
So it has nothing to do with beer.

Chances are high you are not going to find your answers here.
You could try sending an email to the brewers and ask them.
They should know what they brew.

"Cï¿½dric" wrote:
>
> Somebody could say to me if these beers are always brewed:
>
> 1_"Abbaye d'aulne" ....De Smet Brewery
> 2_"Leffe vieille cuvï¿½e" ....Interbrew Brewery
> 3_"Septante 5" ....Grande brasserie moderne
> 4_"Alexander" ....Rodenbach
> 5_"Aerts 1900" ....Haacht Brewery
> 6_"Elephant" ....Carlsberg
> 7_"Tuborg dore" ....Tuborg Brewery

--
Peter O
http://www.lennik.org

Warp 7 -- It's a law we can live with.

2046. Re: Do they still brew?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 14:07:32 UTC
From: AB2HR <ab2hr@arrl.net>
Message-ID: <urnu8u0r7pk4iebdakpivcn4sqa9iridjn@4ax.com>
Source record: 45688

On Wed, 13 Mar 2002 09:14:37 +0100, "Cï¿½dric" <info@guichaoua.fr.st>
wrote:

>Somebody could say to me if these beers are always brewed:
>
>1_"Abbaye d'aulne" ....De Smet Brewery
>2_"Leffe vieille cuvï¿½e" ....Interbrew Brewery
>3_"Septante 5" ....Grande brasserie moderne
>4_"Alexander" ....Rodenbach
>5_"Aerts 1900" ....Haacht Brewery
>6_"Elephant" ....Carlsberg
>7_"Tuborg dore" ....Tuborg Brewery
>
>
>

You have no clue, have you?

Raymond Sirois AB2HR
SysOp: The Lost Chord BBS
607-733-5745
telnet:\\thelostchord.dns2go.com:6000

2047. Re: Do they still brew?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 14:28:51 UTC
From: n7ws@yahoo.com
Message-ID: <3c8f61b4.51469408@news.triconet.org>
Source record: 45689

On Wed, 13 Mar 2002 14:55:02 +0100, Peter O <peter.o@lennik.org> wrote:

|
|This newsgroup is about building radio-equipment by amateurs.
|This is also called homebrewing.
|So it has nothing to do with beer.

You obviously have never participated in Field Day.

2048. Re: Do they still brew?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 14:38:13 UTC
From: Peter O <peter.o@lennik.org>
Message-ID: <3C8F6455.58ED53DF@lennik.org>
Source record: 45690

Wes Stewart wrote:
>
> On Wed, 13 Mar 2002 14:55:02 +0100, Peter O <peter.o@lennik.org> wrote:
>
> |
> |This newsgroup is about building radio-equipment by amateurs.
> |This is also called homebrewing.
> |So it has nothing to do with beer.
>
> You obviously have never participated in Field Day.

I could have expected this.

The kind of beers mentionned in the original message are not often found
on Field Days.
Must have something to do with signal-reports or so ,-)

--
Peter O
http://www.lennik.org

Warp 7 -- It's a law we can live with.

2049. Re: Do they still brew?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 14:54:08 UTC
From: n7ws@yahoo.com
Message-ID: <3c8f67b7.53008300@news.triconet.org>
Source record: 45691

On Wed, 13 Mar 2002 15:38:13 +0100, Peter O <peter.o@lennik.org> wrote:

|Wes Stewart wrote:
|>
|> On Wed, 13 Mar 2002 14:55:02 +0100, Peter O <peter.o@lennik.org> wrote:
|>
|> |
|> |This newsgroup is about building radio-equipment by amateurs.
|> |This is also called homebrewing.
|> |So it has nothing to do with beer.
|>
|> You obviously have never participated in Field Day.
|
|I could have expected this.
|
|The kind of beers mentionned in the original message are not often found
|on Field Days.
|Must have something to do with signal-reports or so ,-)

True. Also, none were "homebrew" in the first place, so it really was
"off-topic" no matter where it was posted.
|
|
|--
| Peter O
|http://www.lennik.org
|---
|Warp 7 -- It's a law we can live with.

2050. Frequency Meter Project from July 1986 Radio Electronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 15:10:17 UTC
From: w.harbourjr@worldnet.att.net
Message-ID: <deafe3d9.0203130710.210b37fd@posting.google.com>
Source record: 45692

Got two old boards from a July 1986 Radio Electronics
Frequency Meter Project. The boards are in perfect
shape and are ready for parts.

I need a ICM7216DIPI Universal Frequency Counter, CA3179
pre-scaler, DISP1 seven segment display, and a DISP2
seven segment display.

If anyone has any of these and their willing to part
with them just let me know the price. Or maybe someone would know the
new equivalents.

Tnx,

Bill
KD4PWB

2051. Voice link over spread spectrum

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 15:13:32 UTC
From: c.a.m@nospam.blueyonder.co.uk
Message-ID: <1squ8usiccrvqm3v85lbfngtkco2k4jb1d@4ax.com>
Source record: 45693

Hi.

I've at last made a .pdf document of the 'Voice Link Over Spread Spectrum Radio' article (from UK mag Wireless World) i mentioned a while back ... soz for the delay.

<www.nospagetti.com/voice_link_over_spread_spectrum_radio.pdf>

3.1meg

Clive

2052. Re: WANTED: how to homebrew a better SWR noise bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 16:15:45 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0203130815.5c6546bf@posting.google.com>
Source record: 45694
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<o4gs8u8ep3pd4l9feei3unn6ouvtanrflg@4ax.com>...
>
> Automatic Gain/Volume Control. When engaged, it compresses the audio
> volume range of signals received so that weak performers and
> powerhouses sound nearly the same. This answers your complaint of the
> tepid response to otherwise serious change in levels, but is unlikely
> to satisfy. Keep the AGC on and observe the S-Meter instead (the
> S-Meter is a direct reading of AGC potential in many sets).
>
I have been using the S-meter more than my ear, as it takes a low SWR
to make the difference clearly audible. But I don't like the S meter
on my Kenwood TS-430S. It resembes a shrunken version of the
speedometers of some 1960s and 1970s GM vehicles like the one on this
1969 Cadillac
(http://kevingilligan.tripod.com/sitebuildercontent/sitebuilderpictures/inst.jpg).
Imagine that the Cadillac speedometer is shrunk so that it is just 1
inch in diameter. Then imagine that the marks for x5 mph (05, 15, 25,
35, etc.) are taken out. You'd have difficulty telling whether you
were driving 53 or 57 mph. This should show you why I don't like the
S meter on my rig. S5 to S9 is the middle of my S meter, and the
marks are so close together and make it difficult to notice subtle
changes. The area beyond S9 is difficult to read, because each
marking represents a 20 dB change instead of the 6 dB typical for the
S1 to S9 area.

With the 20 dB attenuator on, I usually find that the noise bridge
gives me an S9 reading for a mismatch and an S5 to S7 reading for a
match. Because the bandwidth is so narrow on the lower bands, I
sometimes overshoot because I miss that QUICK null. If I had to rely
on the S meter, I'd rather have a mismatch correspond to S5 and a
match correspond to S1 to S3, as the meter is easier to read in this
region. Also, the audible noise level difference would be more
noticeable.
>
> And as well it should. This suggests you would feel better with a
> higher amplitude white noise source. As I said, designing and
> building a linear amp will test your self challenge. It is not such a
> difficult first assignment, and neither is it a brush-off.
>
OK, I see what you are getting at. I want an extra amplifier built-in
to strengthen the noise source. The reflected component of the
received signal resulting from the noise bridge would dwarf the low

band spikes I have been complaining about. I'd also want to put in an attenuator to avoid overloading the receiver. Since I'm stuck with my lame S meter (as I don't want to add the complexity of a frequency control to the noise bridge), I would also want to make the amount of amplification and attenuation adjustable. Thus, I can make S5 the mismatch noise level and S1 the match noise level instead of S9 and S5.

To distinguish between an SWR of 10 and an SWR of 100, I'll probably need some type of differential amplifier in the circuit. I have noticed from the equations that the reflected voltage for an SWR of 100 is not much higher than that associated with an SWR of 10. So I think I can use a toggle switch to activate such a differential amplifier. This will allow me to easily see that I'm getting closer to a match on 80m, even if my SWR is still 5-10 or more.

By the way, Richard, thanks for your comments. I have a better idea now of just how a noise bridge works.

Jason Hsu, AG4DG
jason_hsu_802701@@@@@yahoo.com
http://www.jasonhsu.com/ham_radio-technical.html

2053. Re: MFJ 259 Fault

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 16:26:42 UTC
From: Robert Lyons <boblyons@umich.edu>
Message-ID: <3C8F7DC3.C5B8F96D@umich.edu>
Source record: 45695

Bob wrote:
>
> My 259 analyser has packed up, just reading zeros in the analyser mode
> although the counter seems to be working. Looks like the oscillator has
> stopped. Has anyone else seen this fault, or even fixed it? MFJ service non
> existent, won't be buying any more of this rubbish having seen inside it!

Yes. Jiggle the range selector knob and see if the frequency display comes back from 0. Mine does this, as does a friends' unit. In his case, he has to actually hold the knob slightly turned to get it to function. As soon as he lets it go, the display (and probably the oscillator) goes to 0 again.

Let me know if MFJ is willing to fix it. I haven't bothered.

73 - Bob, KI8AB

2054. Re: WANTED: how to homebrew a better SWR noise bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 17:12:00 UTC
From: K7JEB <k7jeb@arrl.no_spam.net>
Message-ID: <ALLj8.6938$tP2.636254@bgtnsc05-news.ops.worldnet.att.net>
Source record: 45696
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Jason Hsu, AG4DG, posted:

> I have been using the S-meter more than my ear, as it
> takes a low SWR to make the difference clearly audible.
> But I don't like the S meter on my Kenwood TS-430S....

> ....S5 to S9 is the middle of my S meter, and the
> marks are so close together and make it difficult to
> notice subtle changes. The area beyond S9 is difficult
> to read, because each marking represents a 20 dB change
> instead of the 6 dB typical for the S1 to S9 area....

Jason, my suggestion would be to connect a sensitive AC voltmeter across the speaker output of the TS-430 and do the following:

(1) Crank the RF Gain control completely counterclockwise (ie: full off)

(2) Crank the AF Gain control completely clockwise (ie: full on)

(3) Turn on the Noise Bridge and adjust the AC voltmeter sensitivity and RF Gain until you have full-scale meter deflection and a comfortable listening level.

(4) Tune for a null. A 6 dB reduction in bridge output will now correspond to a reduction in meter deflection to half scale. If, as you approach the null, you find you need more sensitivity, adjust the RF Gain upward so that the meter is once again at full scale and continue.

(5) Ignore the S-meter entirely (of course).

--
Jim Bromley, K7JEB k7jeb @ arrl.net
Glendale, Arizona

2055. simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 17:32:08 UTC
From: vshah101@aol.com
Message-ID: <20020313123208.06075.00001155@mb-mf.aol.com>
Source record: 45597

If I want to connect an rf amplifier circuit, such as a MAR-X amplifier to the input of a Spectrum Analyzer or Oscilloscope, which connector would I use? I could use chasis mount BNC connector, but is this connector the right connector for a 1GHZ amplifier? Is VCR cable connector a good connector? Does using an adapter to convert fom one type of connector to BCN connector change the usable frequecy?

2056. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 18:19:43 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u8v61hm642p12e@corp.supernews.com>
Source record: 45598
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

And this link came through just fine (I let it sit twice for ten minutes yesterday and it just sat there blank with "done" in the to-do box). I got the general idea from this data sheet, but even this reference presumes a universe of knowledge I don't have.

I'm really not arguing with you guys, at least not Steve and Gary. However, I'm somewhat baffled by acronyms that you all take for granted and I'm just learning. To put it in some perspective, consider the computer engineer that wants to know something about constructing an antenna. To send him to references that consider the triple integral of the phase front when all he wanted to know was how to whack up a dipole isn't helpful. The AN9509 reference below is great.

Now, the final question and perhaps we can all get out of this thread alive...are there other references such as the 9509 below that take an analog beginner gently by the hand into the wonderful world of digital doofusing without all the ocean of detail? I mean, it is fine and wonderful to learn how to use a micrometer, but if you haven't been exposed to a yardstick, it is a lesson too early. Perhaps the ARRL Handbook of the digital world?

"red rover" <natpress@sympatico.ca> wrote in message news:wWyj8.47409$4E4.5791148@news20.bellglobal.com...

>
> I don't know what the problem with this link is
> http://www.intersil.com/data/an/an9/an9509/an9509.pdf
> I grabbed it just before posting and just visited it without
> any problems.

2057. Re: WANTED: how to homebrew a better SWR noise bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 18:33:38 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <cv4v8ukelv2bio7oilr97cpst9t7q69hos@4ax.com>
Source record: 45599
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On 13 Mar 2002 08:15:45 -0800, jason_hsu@my-deja.com (Jason Hsu)
wrote:

>I have been using the S-meter more than my ear, as it takes a low SWR
>to make the difference clearly audible. But I don't like the S meter
>on my Kenwood TS-430S. It resembes a shrunken version of the
>speedometers of some 1960s and 1970s GM vehicles like the one on this
>1969 Cadillac
(http://kevingilligan.tripod.com/sitebuildercontent/sitebuilderpictures/inst.jpg).
> Imagine that the Cadillac speedometer is shrunk so that it is just 1
>inch in diameter. Then imagine that the marks for x5 mph (05, 15, 25,
>35, etc.) are taken out. You'd have difficulty telling whether you
>were driving 53 or 57 mph. This should show you why I don't like the
>S meter on my rig. S5 to S9 is the middle of my S meter, and the
>marks are so close together and make it difficult to notice subtle
>changes. The area beyond S9 is difficult to read, because each
>marking represents a 20 dB change instead of the 6 dB typical for the
>S1 to S9 area.
>
snip
>
>Jason Hsu, AG4DG

Hi Jason,

I see no reason to add or use an attenuator, there is absolutely no problem with overloading the front end. Your source may effectively provide a fraction of a Watt in power, but the band pass filters of your TS-430s (same one of two HF rigs I have, the other is a Drake TR-7) easily pushes down the amount of power applied to the first mixer to a level of microWatts. In fact, it would be a paradox to build an amp for the white noise source and then attenuate it.

The simple solution would be to tap off that S-Meter voltage and feed it to a VCO in the audio range that in turn drives a separate speaker (or mix it back into the audio chain through a special switch). This is a very cheap design that could be accomplished with the venerable 555 timer chip, or with the already mentioned VCO's which would interface easier - perhaps.

This would give you a variable tone whose frequency is driven by the S-Meter level. By Adjusting the top end frequency and bottom end frequencies of the VCO to match full scale deflection and no deflection, you will find that your ear does far better in resolving differences that escape your notice by viewing any size meter.

As for your complaint that you sometimes miss the null because it is so sharp, you are arguing the opposite. When I use my TS-430 for bridge applications the nulls easily plunge 100dB; what you describe seems to be a tepid 30 or 40dB at best (if then). This is not your fault, it simply an illustration of balance, bandwidth and isolation (which you may be suffering from the lack of). If I were to use my own idea of the whistling S-Meter, the 100dB notch would sound like a low thump in a warble, as I traversed it. If I inverted the voltage to frequency conversion, it would be a quick high chirp, or click, in a field of rumbling. The occurence of either of these two indicators would be enough to cause you to tune back and peak the response. For anyone who has tuned SSB, it is more than obvious how much difference several 10's of Hertz can make. The ear is a very good discriminator. With a full scale equivalent at 1000Hz, this would be the log equivalent of less than 5% resolution, something entirely lost in a 1 inch meter.

73's
Richard Clark, KB7QHC

2058. FS: MILITARY 6V3A rectifier tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 18:35:05 UTC
From: ovrreactor@aol.com-nospam
Message-ID: <20020313133505.06031.00001229@mb-mf.aol.com>
Source record: 45600

I am selling 6V3A tubes in oversized padded military boxes. These are indirectly heated rectifiers, 1961-62 date codes. Lots of GE, some Philco/Lansdale.

I have a picture posted at;

http://members.aol.com/ecc81/yardsale

$ 2 each
I have about 50 available

If interested, PLEASE RESPOND BY EMAIL to < OvrReactor@aol.com >

Regards,
Tom Mitchell

2059. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 19:03:31 UTC
From: James Horn <jimhorn@svn.net>
Message-ID: <3c8fa283@news.svn.net>
Source record: 45601
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

Hi, Jim -

I'd highly recommend "RF Design" magazine, if you don't already get it, along with the standard "EDN" and "Electronic Design" magazines as well. All have covered these issues and are freebies to those of us in the field. And if your fine work at RST and many articles don't qualify you for 'em - well, that's their loss!

Best to you and yours -

Jim Horn, WB9SYN/6 (at Wescam Corp: 707-473-1100)

2060. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 19:27:04 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u8v9vr17nmd8e4@corp.supernews.com>
Source record: 45602
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

I get both EDN and Electronic Design, and I've been both an author and a seminar host for RF Design. However, for whatever reason, RF Design stopped coming about a year ago and nothing I write to them seems to turn the faucet back on. Go figure.

And, of course, all that "digital crap" I never thought I'd want to dick around with has long since been consigned to the recycle pile...if I kept every article I thought I'd use some day I'd have to rent the Taj Mahal to file it, employ two librarians to keep track of it, and if I started to read everything of interest in our field today, by next year this time I'd be two years behind {;-)

Jim

"James Horn" <jimhorn@svn.net> wrote in message
news:3c8fa283@news.svn.net...
> Hi, Jim -
>
> I'd highly recommend "RF Design" magazine, if you don't already get it,
> along with the standard "EDN" and "Electronic Design" magazines as well.
> All have covered these issues and are freebies to those of us in the
> field. And if your fine work at RST and many articles don't qualify you
> for 'em - well, that's their loss!
>
> Best to you and yours -
>
> Jim Horn, WB9SYN/6 (at Wescam Corp: 707-473-1100)

2061. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 20:13:58 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C8F9DDE.4316@pop.removethistomailme.net>
Source record: 45603

Vshah101 wrote:
>
> If I want to connect an rf amplifier circuit, such as a MAR-X amplifier to the
> input of a Spectrum Analyzer or Oscilloscope, which connector would I use? I
> could use chasis mount BNC connector, but is this connector the right connector
> for a 1GHZ amplifier?

A good-quality BNC connector is fine at 1 GHz.

> Is VCR cable connector a good connector?

No. CATV cable is the wrong impedance, doesn't bend well, and generally
has low overall shielding quality (read: the minimum necessary to
accomplish its intended purpose). (Obviously, the RCA-jack cables used
with VCRs are right out at 1 GHz!)

> Does using an
> adapter to convert fom one type of connector to BNC connector
> change the usable frequecy?

It can, if the adapter is of inferior RF quality. With BNC hardware in
particular, you have to watch out for LAN-grade components that were
never meant to pass signals greater than 10-20 MHz. There are some
truly terrible BNC adapters and cables out there that could lose upwards
of 10 dB or more at 1 GHz.

For homebrewing with MMICs, I use SMA jacks and cabling. Their physical
size and RF characteristics are much better suited for use with
GHz-range components than BNC. Go surf around on eBay, and you'll find
all the interconnects and cables you need.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2062. Re: Annoying, persistent, elusive, intermittent QRN problem: help please!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-13 23:32:47 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <zkRj8.69600$uv5.5753105@bin6.nnrp.aus1.giganews.com>
Source record: 45604

I sent the link to the head of semiconductor physics at my alma mater! What a hoot. Just imagine those H2 molecules jiggling.

"Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message news:3C8DAA59.DEE56CD@clifto.com...
> Will White wrote:
> > The noise comes on for exactly 2' 15", and goes off for exactly 1' 25".
>
> Fishtank heater in the area?
>
> --
> Britney Spears' Guide to Semiconductor Physics
> <http://britneyspears.ac/lasers.htm>
>

2063. LOOKING FOR non-working equipment?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-14 00:30:54 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3C8FEF3E.986D0351@charter.net>
Source record: 45605

What do you have laying around using as a door stop?
chris NI4L

--

NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

2064. W5QJT SK

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-14 02:09:34 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <3c9005b6$1_1@newsa.ev1.net>
Source record: 45606

Master home brewer, Milton Levy W5QJT SK Feb. 1, 2002
This guy was an amazing builder, ham radio has lost a good one.
His estate has been completely liquidated as of this date.

R.I.P. "Uncle Milty..."

--
Respond to my "real" e-mail;
kk5dr@ev1.net

2065. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-14 02:30:43 UTC
From: gaschafer@attbi.com
Message-ID: <3c900999.41974859@netnews.attbi.com>
Source record: 45607

Bnc connectors are not good at 1ghz. Type N is much better. Tnc is ok.
Look at some of the better test equipment like HP or Motorola. Most
all have type N when 1 ghz is involved.

Adapters are bad at frequencies well below 1ghz. This is assuming that
you are concerned with very low vswr.

73
Gary K4FMX

On 13 Mar 2002 17:32:08 GMT, vshah101@aol.com (Vshah101) wrote:

>If I want to connect an rf amplifier circuit, such as a MAR-X amplifier to the
>input of a Spectrum Analyzer or Oscilloscope, which connector would I use? I
>could use chasis mount BNC connector, but is this connector the right connector
>for a 1GHZ amplifier? Is VCR cable connector a good connector? Does using an
>adapter to convert fom one type of connector to BCN connector change the usable
>frequecy?

2066. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-14 02:49:21 UTC
From: Gary Glaenzer <nobulltrans@mchsi.com>
Message-ID: <RcUj8.34050$af7.27531@rwcrnsc53>
Source record: 45608

ummmm......PL-259's are bad, m'kay?

Mr. Mackey

"Gary Schafer" <gaschafer@attbi.com> wrote in message
news:3c900999.41974859@netnews.attbi.com...
> Bnc connectors are not good at 1ghz. Type N is much better. Tnc is ok.
> Look at some of the better test equipment like HP or Motorola. Most
> all have type N when 1 ghz is involved.
>
> Adapters are bad at frequencies well below 1ghz. This is assuming that
> you are concerned with very low vswr.
>
> 73
> Gary K4FMX
>
>
> On 13 Mar 2002 17:32:08 GMT, vshah101@aol.com (Vshah101) wrote:
>
> >If I want to connect an rf amplifier circuit, such as a MAR-X amplifier
to the
> >input of a Spectrum Analyzer or Oscilloscope, which connector would I
use? I
> >could use chasis mount BNC connector, but is this connector the right
connector
> >for a 1GHZ amplifier? Is VCR cable connector a good connector? Does using
an
> >adapter to convert fom one type of connector to BCN connector change the
usable
> >frequecy?
>

2067. Re: swap new 3-500z for 4-250

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-14 03:04:08 UTC
From: George Of The Jungle? <bigfoot69@yahoe.comm>
Message-ID: <IqUj8.453978$eS3.34422223@bin3.nnrp.aus1.giganews.com>
Source record: 45609

I have 2 brand new never used Eimac 4cx250b tubes.
"Philip Lawrence" <hitriode@iinet.net.au> wrote in message
news:3C8F38F0.97C877CC@iinet.net.au...
> swap new 3-500Z for 4-250
> Phil
>
>

2068. Re: WANTED: how to homebrew a better SWR noise bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-14 03:37:38 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0203131937.315c528c@posting.google.com>
Source record: 45610
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<cv4v8ukelv2bio7oilr97cpst9t7q69hos@4ax.com>...
>
> Hi Jason,
>
> I see no reason to add or use an attenuator, there is absolutely no
> problem with overloading the front end. Your source may effectively
> provide a fraction of a Watt in power, but the band pass filters of
> your TS-430s (same one of two HF rigs I have, the other is a Drake
> TR-7) easily pushes down the amount of power applied to the first
> mixer to a level of microWatts. In fact, it would be a paradox to
> build an amp for the white noise source and then attenuate it.
>
I can explain this parodox. The amplifier would ensure that the
reflected voltage is strong enough that those darned noise spikes
don't foil my efforts to find the null. The attenuation would be
adjustable. I'd like the noise level corresponding to a mismatch to
be S5 instead of S9. The S1 to S5 part of the S meter is easier to
read than the S5 to S9 part.

> The simple solution would be to tap off that S-Meter voltage and feed
> it to a VCO in the audio range that in turn drives a separate speaker
> (or mix it back into the audio chain through a special switch). This
> is a very cheap design that could be accomplished with the venerable
> 555 timer chip, or with the already mentioned VCO's which would
> interface easier - perhaps.
>
You have a point, but I'd rather have everything in one package.

> This would give you a variable tone whose frequency is driven by the
> S-Meter level. By Adjusting the top end frequency and bottom end
> frequencies of the VCO to match full scale deflection and no
> deflection, you will find that your ear does far better in resolving
> differences that escape your notice by viewing any size meter.
>
This is an interesting idea - frequency changes instead of volume
changes. I'll have to think about this one.

> As for your complaint that you sometimes miss the null because it is
> so sharp, you are arguing the opposite. When I use my TS-430 for
> bridge applications the nulls easily plunge 100dB; what you describe
> seems to be a tepid 30 or 40dB at best (if then). This is not your
> fault, it simply an illustration of balance, bandwidth and isolation
> (which you may be suffering from the lack of). If I were to use my

> own idea of the whistling S-Meter, the 100dB notch would sound like a
> low thump in a warble, as I traversed it. If I inverted the voltage
> to frequency conversion, it would be a quick high chirp, or click, in
> a field of rumbling. The occurence of either of these two indicators
> would be enough to cause you to tune back and peak the response. For
> anyone who has tuned SSB, it is more than obvious how much difference
> several 10's of Hertz can make. The ear is a very good discriminator.
> With a full scale equivalent at 1000Hz, this would be the log
> equivalent of less than 5% resolution, something entirely lost in a 1
> inch meter.
>
OK, I guess I didn't express myself right when I said I missed the
null because it was so sharp. Actually, the null was VERY narrow.
When I tune on 80m, it's easy to miss the null. For my DK3
Screwdriver antenna, the SWR doesn't decline all the way to 1.0 on
80m. I can only get it down to 3-5, and the S meter doesn't move that
much to get here from high SWR values.

Jason Hsu, AG4DG
jason_hsu_802701@@@@yahoo.com

2069. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-14 03:49:06 UTC
From: red rover <natpress@sympatico.ca>
Message-ID: <k3Vj8.52141$4E4.6199289@news20.bellglobal.com>
Source record: 45611
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

Hi Jim,

Try this link

http://www.dspguide.com/

this has a free electronic copy of "The Scientists and Engineer's Guide
to Digital Signal Processing".

I've got a free paperback copy that ADI was giving away a few months
ago. A pretty good guide for the price ;-) Maybe they still have some.

ADI's softcopy is here
http://www.analog.com/technology/dsp/training/materials/dsp_book_index.html

There is a very good course called "DSP without Tears" if you can get your
company to foot the bill...

http://www.zdt.com/shock/dsp1.htm

You'll probably like that one because the guy who created the
course was totally pissed off with academics who deliberately
made the subject look complicated in order to pump up their
self-esteem and make it look hard. I haven't taken the course
but I hear he's good.

I came from an analog background and on one hand there is
the learning curve with thinking digitally etc. But on the flip side
you will find that there are people from the digital/software side
who are learning this stuff and getting totally hung up on what
the objective is (which is totally analogous to the old-fangled
analog). You will have a big leg up on them if you know the
different filter topologies and uses etc. Also, you will have
a better appreciation of what the analog equivalent would cost.

Look at Chapter 21 for a comparison of analog/digital
filters.

http://www.dspguide.com/ch21.htm

From an analog background I liked the FIR filter.
It is easy to understand, inherently stable and because
it has zero phase distortion it has big leg up on most analog
filters. The downside is that it uses alot of gates (which
get cheaper every year, unlike op amps and quality
discretes). So the digital guys often turn to IIR filters to get
similar performance with fewer gates. The downside?

Hey, this is starting to look analog. Those damn IIR filters
can oscillate and/or introduce phase distortion. Your back
to the same old problems of analog.

Hope you enjoy the reading. Now go whack that dipole...

Steve

Jim Weir wrote in message ...
>And this link came through just fine (I let it sit twice for ten minutes
>yesterday and it just sat there blank with "done" in the to-do box). I got
>the general idea from this data sheet, but even this reference presumes a
>universe of knowledge I don't have.
>
>I'm really not arguing with you guys, at least not Steve and Gary.
However,
>I'm somewhat baffled by acronyms that you all take for granted and I'm just
>learning. To put it in some perspective, consider the computer engineer
>that wants to know something about constructing an antenna. To send him to
>references that consider the triple integral of the phase front when all he
>wanted to know was how to whack up a dipole isn't helpful. The AN9509
>reference below is great.
>
>Now, the final question and perhaps we can all get out of this thread
>alive...are there other references such as the 9509 below that take an
>analog beginner gently by the hand into the wonderful world of digital
>doofusing without all the ocean of detail? I mean, it is fine and
wonderful
>to learn how to use a micrometer, but if you haven't been exposed to a
>yardstick, it is a lesson too early. Perhaps the ARRL Handbook of the
>digital world?
>
>"red rover" <natpress@sympatico.ca> wrote in message
>news:wWyj8.47409$4E4.5791148@news20.bellglobal.com...
>
>>
>> I don't know what the problem with this link is
>> http://www.intersil.com/data/an/an9/an9509/an9509.pdf
>> I grabbed it just before posting and just visited it without
>> any problems.
>
>
>

2070. Re: WANTED: how to homebrew a better SWR noise bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-14 04:07:07 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3C9021E6.FDE36BC4@cox.net>
Source record: 45612
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

I have not tried it, but I understand that pulsing the power to the
noise source a couple times a second makes the bridge noise more readily
distinguishable from the normal band background noise. This aids in
tuning for a better null, especially in the presence of band noise.

- Dan Tayloe, N7VE; Phoenix, Az; Az ScQRPions

K7JEB wrote:
>
> Jason Hsu, AG4DG, posted:
>
> > I have been using the S-meter more than my ear, as it
> > takes a low SWR to make the difference clearly audible.
> > But I don't like the S meter on my Kenwood TS-430S....
>
> > ....S5 to S9 is the middle of my S meter, and the
> > marks are so close together and make it difficult to
> > notice subtle changes. The area beyond S9 is difficult
> > to read, because each marking represents a 20 dB change
> > instead of the 6 dB typical for the S1 to S9 area....
>
> Jason, my suggestion would be to connect a sensitive AC
> voltmeter across the speaker output of the TS-430 and
> do the following:
>
> (1) Crank the RF Gain control completely counterclockwise
> (ie: full off)
>
> (2) Crank the AF Gain control completely clockwise (ie:
> full on)
>
> (3) Turn on the Noise Bridge and adjust the AC voltmeter
> sensitivity and RF Gain until you have full-scale
> meter deflection and a comfortable listening level.
>
> (4) Tune for a null. A 6 dB reduction in bridge output
> will now correspond to a reduction in meter deflection
> to half scale. If, as you approach the null, you
> find you need more sensitivity, adjust the RF Gain
> upward so that the meter is once again at full scale
> and continue.
>
> (5) Ignore the S-meter entirely (of course).
>

>
> --
> Jim Bromley, K7JEB k7jeb @ arrl.net
> Glendale, Arizona

2071. [Fwd: Re: CMOS switches and RF/mixers]

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-14 04:08:10 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3C902225.F164206D@cox.net>
Source record: 45613

I am looking at my ARRL handbook (1999, chapter 15, page 15, which shows how a diode ring mixer switches. It is normally a three port device, RF input, LO input, and IF output. The diagram shows the IF output off the center tap of the secondary side of the RF input.

Since the LO is not driving the ring directly, it looks like the affect of the switching diodes is to reverse the polarity of the input RF signal to the IF at the LO rate. This is where the switching action comes from.

One way to do this with no LO connection, is to set the RF secondary center tap to RF ground (bypass with a 0.1 uf cap) and apply the 1.5v or 2.5v DC switch bias at this point. A simple resistive divider works well for the bias for my detectors. I use two 2.2K resistors and a 47 uf cap and a 0.1 uf cap at the 1/2 voltage junction.

Take the two secondary transformer ends and feed them to the 2:1 mux chip. The common end of the mux chip (the "1" side) should be AC coupled to the IF stage, while the "2" sides of the mux each connect to one end of the RF input transformer.

The LO feeding the select line of this single 2:1 mux chip will then reverse the phase of the incoming RF to the IF port with each half cycle of the LO, giving the proper mixing action.

These devices will likely be available from Digikey, quantity 1 sometime soon. I see that Digikey has them in their database, but have none in stock. If you really had to, you could use the TI 74CBT3253 or 74CBTLV3253 part that is in stock (dual 1 of 4) to get the "1 of 2" action you need.

- Dan, N7VE

Richard Hosking wrote:
>
> Dan
> I am trying to visualize how they would be connected.
> Two of them could be made to look like a ring mixer (I think) but I am not
> exactly sure how it all goes together
> I guess it would look like input->3dB hybrid splitter->2 single ended
> inputs. Outputs cross connected (ie 1A+2B and 2A+1B) to a differential input
> device (eg opamp or balanced transformer). LO switches at 180 degrees
> They are very small (SSOP size) 6 pin devices
> It may be difficult getting them in hobbyist quantities.
> What do you think?
> BTW I have showed Rod how to get onto the NG so we may see him there

>
> Richard
> .
> ----- Original Message -----
> From: "Dan Tayloe" <dtayloe@cox.net>
> To: <richardh@iinet.net.au>
> Sent: Monday, March 11, 2002 10:09 PM
> Subject: CMOS switches and RF/mixers
>
> > >Looks like the new bus switch series devices would do well
> > >Has anyone tried the TinyLogic series eg Fairchild
> > >NC7SB3157 SPDT switch?
> > >I am thinking this could be used in a balanced mixer - due to the double
> > >throw action it would be inherently balanced
> > >Could two of these look like a diode ring mixer?
> > >Richard
> >
> > These would likely work very well for that purpose. Just remember
> > to DC bias the inputs to one half the supply voltage.
> >
> > - Dan, N7VE
> >

2072. FS: Real Nice Panel Meters, CHEEP!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-14 04:25:35 UTC
From: rlucch2098@aol.com
Message-ID: <20020313232535.24396.00000975@mb-de.aol.com>
Source record: 45614

Hi Guys;
I have these panel meters that I had bought once for my pal W7ASW, here on long island, A long time Homebrewer. Unfortunetly he shortly therafter became a SK.
So I have these 5 sets(10 total) Made in England Panel meters.
They are high quality and have been tested at 5vdc for full scale as the meter scale says. They were made to read temperature so you'll need to shunt accordingly.
The internal shunt is a 5K ohm resistor with plently of room to replace it, easily.
The meter measures 4"w x 3-1/2"h, with 3/8" thick from panel face. looks like it needs a 2.5" hole in the panel. These are used but just need a bit-o-cleaning & they'll be really nice.
The Scale can be easily removed with a few screws from the front, scanned into your 'puter & remarked/printed out & then pasted over the original aluminum base plate of the scale.
Here are some pics>>
http://www.baltimorepress.com/~wa2rqy/panelmeter1.jpg
http://www.baltimorepress.com/~wa2rqy/panelmeter2.jpg
http://www.baltimorepress.com/~wa2rqy/panelmeter3.jpg
Price is $15 per set shipped.
Thanks es 73....Rich WA2RQY (1961)
WA2RQY's "confusion Radio" Web-Page
Http://members.aol.com/rlucch2098/index.html
RLUCCH2098@aol.com
"Keep those heaters on"

2073. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-14 13:00:58 UTC
From: charles.k.scott@deathtospammers.dartmouth.edu
Message-ID: <3c909eb6.88148437@news.dartmouth.edu>
Source record: 45616
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

On Wed, 13 Mar 2002 22:49:06 -0500, "red rover"
<natpress@sympatico.ca> wrote:

>Hi Jim,
>
>Try this link

Big snip.

I can't tell you what a nice warm fuzzy it gives me to know that there
are still people speaking this language, even though I don't
understand it. ;-)

Corky Scott

2074. Re: Digital Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-14 13:06:15 UTC
From: Val <nishikeit@zilch.com>
Message-ID: <3C90A047.9566D0D1@zilch.com>
Source record: 45615

Just take a look:

http://home4.swipnet.se/~w-41522/lfconv/lfconv.html

It's not EXACTLY what you have in mind (XOR), but it IS
a digital mixer in a a converter for the 136 kHz European
amateur radio band.

rgrds,
V

Gary Morton wrote:
>
> Just a thought.
>
> I was wondering whether it is possible to build a superhet type receiver
> but using a digital mixer for the LO and incoming signal, i.e. an XOR
> gate. I can get hold of a fairly useful programmable PLL chip from work
> which should work as a suitable LO, although it may need a bit of
> dividing down.
>
> Is there a way to get the input signal into a suitable digital form?
> Will the XOR mixer work?
> What do you do with the resulting signal?
>
> regards...
>
> --Gary

2075. Radiation from monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-14 14:16:19 UTC
From: bpasaric@mac.com
Message-ID: <rhbys2.1x5lusy1xf6cg0N%bpasaric@mac.com>
Source record: 45637

I have made the following experiment: I took a PC monitor and switched it on. Then I took a new ordinary colour negative film. I went into a dark room and pulled out one half of it. The first half remained in its tin can, and I put the second half into its black plastic box. So the first half of the negative was protected by a tin box, and the second half was protected from light by a strong black plastic box. Then I stuck both the halves onto the middle of the monitor screen with some adhesive tape, and left it there for four hours. After that time I had both the halves developed. The first half from the tin box was completely transperent, i.e. unexposed, while the second one from the plastic box was completely black, i.e. exposed. Exposed to what? Obviously X-rays!!! I repeated this experiment with several other types of monitors, but the result was always the same.

Factories never give any data of the X-radiation of their screens. How strong is it? Some people sit by the screen for 8 hours a day, 250 workdays a year - year after year. How dangerous is it? Does anyone know something more about it? Why don't factories pulbish that radiation in radiation units? Any comments?

Bozidar, 9A2HL

2076. Radiation from monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-14 14:21:42 UTC
From: bpasaric@mac.com
Message-ID: <1f91jy4.1f0397y10z1xi0N%bpasaric@mac.com>
Source record: 45638

I have made the following experiment: I took a PC monitor and switched it on. Then I bought an ordinary colour negative film. I went into a dark room and pulled out one half of it . The first half remained in its tin can, and I put the second half into its black plastic box. So the first half of the negative was protected by a tin box, and the second half was protectred from light by a strong black plastic box. Then I stuck both the halves onto the middle of the monitor screen with some adhesive tape, and left it there for four hours. After that time I had both the halves develeoped. The first half from the tin box was completely transperent, i.e. unexposed, while the second one from the plastic box was completely black, i.e. exposed. Exposed to what? Obviously X-rays!!! I repeated this experiment with several other types of monitors, but the result was always the same.

Factories never give any data of the X-radiation of their screens. How strong is it? Some people sit by the screen 8 hours a day, 250 workdays a year - year after year. How dangerous is it? Does anyone know something more about it? Why factories do not pulbish that radiation in radiation units? Any comments?

Bozidar, 9A2HL

2077. Need help on an ITC Spectrum Analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-14 14:26:01 UTC
From: philhorton@aol.com
Message-ID: <20020314092601.04432.00001595@mb-ms.aol.com>
Source record: 45617

Does anyone have any info/manuals on this item? There were apparently three models, differing in freq coverage. I have the SA600A.
Will gladly pay for any info/manuals I can get.
Thanks

2078. Amplifier noise AND dynamic range

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-14 14:31:04 UTC
From: Rodney Green <rodagreen@bigpond.com>
Message-ID: <yv2k8.11616$uR5.23035@newsfeeds.bigpond.com>
Source record: 45618

Ihave two Analog devices AD797 low noise, low distortion amplifiers I am going to use as post mixer amps in a quadrature receiver for SSB. Looking at the spec for noise, it is somewhere between 0.9 and 1.2 nV/sqrt Hz. My noise measuring equipment verified this. However, this amplifier is still not quiet enough, as I have built a circuit which IS, using a parallel pair of 2n 3904 transistors which give a NF of about 2dB. Is there any way of stitching together a desceete amplifier and the AD797 to have a combination low noise amp with high dynamic range? i suspect not somehow!
Thanks from Rod VK6KRG

2079. Very simple CW-generator scheme pls !!??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-14 17:14:05 UTC
From: Ronny <tryit3@hotmail.com>
Message-ID: <xT4k8.5285$DE4.709@afrodite.telenet-ops.be>
Source record: 45619

Hi dr OMs,

Thanks for reading this mail. It is about the following. As a teacher i want to do an experiment on the Doppler-effect. For that purpose i would like to make a very little circuit (based on a NE555?) which generates a sinuswave that is heard through a little loudspeaker and that can be built in in a little ping-pong ball. By moving or throwing that into the classroom, i want to measure the Doppler effect.
As a ham, i am sure that someone has a scheme of a CW practise generator that does want i need !
So if you can help me, pls let me know. My students and myself are gratefull for any tip !

73s de ON4CAY

Ronny
www.on4cay.com

2080. FRAUD ALERT....KB9YTV, bad trader

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-14 17:19:23 UTC
From: Presley Travis <presleytravis@nexet.net>
Message-ID: <3C90DB9B.937B5C5A@nexet.net>
Source record: 45620

On January 28th I agreed to purchase an Alinco DR-M06 , 6 meter
tranceiver
from KB9YTV, Ian Ben Steimle, 1003 LIncoln St, Greebay, Wisconsin 54303.

I sent an Postal Money order Priority mail on Tuesday, January 29th
2002.

I received radio on Friday February 8th...not working

Februay 9th I notified Mr. Steimle and he agreed to refund the $185.00

February 11th I returned radio and he received it February 13th,
promising
overnight refund of $185.00

Several lies later we are without the refund a full month has passed and

emails have ceased from KB9YTV.

I have contacted the FBI Internet Fraud division and the Postal
Inspector...
and will continue to alert the Amateur Radio community...so that nobody
else falls prey to KB9YTV

Tnx & Vy 73,
KA4NNN
Presley Travis
324 Yanceyville Road
Louisa, Virginia 23093

My ebay ID is presleytravis@musician.org
if you would care to check my feedback.

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2081. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-14 17:39:20 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u91o22rruku996@corp.supernews.com>
Source record: 45621
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

I'm getting ready to design a homebuilt (kit) ILS receiver (VOR/LOC/GS) for aircraft and that's OT???

Jim

>
> Ditto here. I enjoyed this thread, even if it is a bit OT
> for rec.aviation.homebuilt where I'm reading it.
>

2082. imput/Output impedance of JFET Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-14 19:37:51 UTC
From: w.harbourjr@worldnet.att.net
Message-ID: <deafe3d9.0203141137.5d0b623c@posting.google.com>
Source record: 45622

I'm using a MPF102 JFET mixer in a 30m receiver project. Does anyone have any idea of the input and output impedances in this application??

Tnx,

Bill Harbour

2083. Re: imput/Output impedance of JFET Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-14 20:49:42 UTC
From: Skipp <skipp@pilotNOSPAMPLEASE.ucdavis.edu>
Message-ID: <a6r2d6$1ld$1@woodrow.ucdavis.edu>
Source record: 45624

In generic common circuits, the input impedance is high and the output would be moderate to low. It all has to do with the way it's placed into a circuit. Parts around it, change the impedances.

The mpf-102 is/was used extensively in hf and vhf circuits, I'm sure many examples can be found in ARRL Handbooks.

cheers
skipp
http://sonic.ucdavis.edu

: Bill Harbour <w.harbourjr@worldnet.att.net> wrote:
: I'm using a MPF102 JFET mixer in a 30m receiver project. Does anyone
: have any idea of the input and output impedances in this application??

: Tnx,

: Bill Harbour

2084. Re: Amplifier noise AND dynamic range

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-14 20:49:53 UTC
From: k7itm@aol.com
Message-ID: <3200347.0203141249.4dda23b6@posting.google.com>
Source record: 45623

Well, yes, I think it can be done. For high dynamic range, you want low distortion and a reasonably high power supply voltage...though in fact, I guess it's doubtful you'd need a clipping level that's terribly high since your mixers will be limited by their compression point if not their distortion below that. You might consider a bootstrapped cascode input stage...you didn't mention what configuration you're using right now. With appropriate feedback, the bootstrapped cascode can be quite linear...distortion products similar to what you'll see with an AD797 or OPA627. You could include an AD797 if you want, though you can also just do the whole preamp stage discrete. (You may find some interesting ideas if you do a search for "moving coil preamp" as related to phono preamps. They deal with trying to get low noise with a low-impedance source, and a wide dynamic range--especially before the equalization.)

So...what configuration do you have now, and what are its shortcomings?

By the way, there was a discussion about a particularly low-noise amplifier on sci.electronics.design a few months ago. I wish I could provide a better pointer to it, but I'd have to go do a search to find it.

Cheers,
Tom

"Rodney Green" <rodagreen@bigpond.com> wrote in message news:<yv2k8.11616$uR5.23035@newsfeeds.bigpond.com>...
> Ihave two Analog devices AD797 low noise, low distortion amplifiers I am
> going to use as post mixer amps in a quadrature receiver for SSB. Looking at
> the spec for noise, it is somewhere between 0.9 and 1.2 nV/sqrt Hz. My noise
> measuring equipment verified this. However, this amplifier is still not
> quiet enough, as I have built a circuit which IS, using a parallel pair of
> 2n 3904 transistors which give a NF of about 2dB. Is there any way of
> stitching together a desceete amplifier and the AD797 to have a combination
> low noise amp with high dynamic range? i suspect not somehow!
> Thanks from Rod VK6KRG

2085. Re: Radiation from monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-14 21:53:42 UTC
From: bpasaric@mac.com
Message-ID: <1f923zx.d60uf71r3ph6eN%bpasaric@mac.com>
Source record: 45554

Roy Lewallen <w7el@eznec.com> wrote:

> Could the film be getting exposed by high speed electrons rather than by
> X-rays?

Hi Roy,
That would be a comforting alternative. However, I do not know if those electrons could penetrate through 6 milimeters of glass, 2 centimeters of air (on average, without any visible effect?) and 1 milimeter of plastic? Is 30 kV enough for that? I am afraid they are X-rays.

BTW:I am afraid that the cumulative effects of time are being neglected when using monitors. The damaging effects of radiation depend on the level of radiation multiplied by the time a person is exposed. If those are really X-rays, a time limit for watching at near distance should be also stated on the CRT.

Bozidar, 9a2hl

P.S. I apologize for the double post. The server was out of work, so I tried again, and finally I got two posts.

2086. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 00:35:11 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C9141BF.E66AD8EC@eznec.com>
Source record: 45625

I hate to see this sort of misinformation passed along. BNC connectors are very good up to at least 4 GHz, and you'll find BNC attenuators rated to at least 12. (Between 4 and 12 their disadvantage is primarily signal leakage, which might or might not cause a problem.) It would be fine for your application. With the exception of "UHF" connectors (PL-259/SO-239 types), quality adapters won't materially degrade signals in the 1 GHz range.

The most degradation you'll enounter is in trying to get the signal from your amplifier to the connector. Just about any way you do it, you'll pick up some series inductance which might reduce the output signal amplitude. The best way is to run a microstrip line directly to the center pin of the connector, and mount the connector's shell in direct contact with the ground plane. A good match (usually meaning lower series inductance) is easier to do with smaller connectors, such as the SMA. But if you can get the signal to the connector, a BNC will work as well at 1 GHz.

People doing precision metrology have much more demanding requirements, so would probably avoid BNC connectors because of small inconsistencies from one mating to another. But for nearly any other purpose, they're fine. And they're inexpensive, easy to get, and adapters, attenuators, and other accessories are common and relatively inexpensive. I use them exclusively unless I have a real need for a smaller connector, in which case I use SMA.

Roy Lewallen, W7EL

Gary Schafer wrote:
>
> Bnc connectors are not good at 1ghz. Type N is much better. Tnc is ok.
> Look at some of the better test equipment like HP or Motorola. Most
> all have type N when 1 ghz is involved.
>
> Adapters are bad at frequencies well below 1ghz. This is assuming that
> you are concerned with very low vswr.
>
> 73
> Gary K4FMX
>
> On 13 Mar 2002 17:32:08 GMT, vshah101@aol.com (Vshah101) wrote:
>
> >If I want to connect an rf amplifier circuit, such as a MAR-X amplifier to the
> >input of a Spectrum Analyzer or Oscilloscope, which connector would I use? I
> >could use chasis mount BNC connector, but is this connector the right connector

> >for a 1GHZ amplifier? Is VCR cable connector a good connector? Does using an
> >adapter to convert fom one type of connector to BCN connector change the usable
> >frequecy?

2087. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 01:29:59 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C914E23.46C6@pop.removethistomailme.net>
Source record: 45579

Roy Lewallen wrote:
>
> I hate to see this sort of misinformation passed along. BNC connectors
> are very good up to at least 4 GHz, and you'll find BNC attenuators
> rated to at least 12.

Right, but there's BNC and then there's BNC. My guess is that he based
his post on empirical observations made with LAN-grade BNC hardware.
There is so much BNC hardware out there that isn't fit for use above the
2-meter band it's not even funny. The only way to be sure about a
given BNC part (at least as far as I could ever tell) is to check it on
a tracking generator or VNA.

On the other hand, SMA hardware is pretty much guaranteed to be good to
a few GHz, probably because it was never commoditized and cost-reduced
by the PC industry the way the BNC standard was back in the 10Base2
days. And as you say, it's much easier to make short, low-loss
connections by hand with the smaller SMA connectors. N-type connectors
are obviously even worse than BNC in this respect, and shouldn't be
considered for homebrewing except in panel-mount applications.

SMA hardware and cabling is so darned cheap and plentiful these days
thanks to eBay that it just doesn't make sense to use anything else,
IMHO.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2088. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 02:40:51 UTC
From: gaschafer@attbi.com
Message-ID: <3c915764.43090602@netnews.attbi.com>
Source record: 45627

It is not misinformation. A bnc connector does not have a flat
impedance response through 1ghz. Yes they are fine for a lot of
applications including 1ghz operation. Even a pl259 will work at
1ghz.
But if you are concerned with flat response over the entire range as I
pointed out a type N connector is supperior.
Measure the vswr on some adaptors sometime, even at frequencies of 450
mhz. They are anything but flat. will they work for a lot of
applications, sure. But if you want very flat response for something
like a spectrum analyzer, like he asked about, a type N is the better
connector.

I use bnc connectors and adaptors much of the time too. They are handy
and easy to find attenuators for etc. But look at any good signal
generator that operates at 1 ghz. It will have a type N connector. The
reason,, Because it has a flater response at 1 ghz.

If it is for general use and you are not concerned with any serious
measurements at 1ghz then bnc is fine.

73
Gary K4FMX

On Thu, 14 Mar 2002 16:35:11 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>I hate to see this sort of misinformation passed along. BNC connectors
>are very good up to at least 4 GHz, and you'll find BNC attenuators
>rated to at least 12. (Between 4 and 12 their disadvantage is primarily
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>
>The most degradation you'll enounter is in trying to get the signal from
>your amplifier to the connector. Just about any way you do it, you'll
>pick up some series inductance which might reduce the output signal
>amplitude. The best way is to run a microstrip line directly to the
>center pin of the connector, and mount the connector's shell in direct
>contact with the ground plane. A good match (usually meaning lower
>series inductance) is easier to do with smaller connectors, such as the
>SMA. But if you can get the signal to the connector, a BNC will work as
>well at 1 GHz.
>
>People doing precision metrology have much more demanding requirements,
>so would probably avoid BNC connectors because of small inconsistencies

>from one mating to another. But for nearly any other purpose, they're
>fine. And they're inexpensive, easy to get, and adapters, attenuators,
>and other accessories are common and relatively inexpensive. I use them
>exclusively unless I have a real need for a smaller connector, in which
>case I use SMA.
>
>Roy Lewallen, W7EL
>
>Gary Schafer wrote:
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>> >for a 1GHZ amplifier? Is VCR cable connector a good connector? Does using an
>> >adapter to convert fom one type of connector to BCN connector change the usable
>> >frequecy?

2089. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 02:43:25 UTC
From: n7ws@yahoo.com
Message-ID: <3c915cc3.5193088@news.triconet.org>
Source record: 45626

On Thu, 14 Mar 2002 02:30:43 GMT, gaschafer@attbi.com (Gary Schafer) wrote:

|Bnc connectors are not good at 1ghz.

BS.

|Type N is much better.

Type N are more robust and more repeatable because they screw on.

| Tnc is ok.

TNC are better than "ok". I know of a military program where a TNC is handling >300W at 10 GHz.

|Look at some of the better test equipment like HP or Motorola. Most
|all have type N when 1 ghz is involved.

That is because they are rugged and can stand many, many connect/disconnect cycles.

|
|Adapters are bad at frequencies well below 1ghz. This is assuming that
|you are concerned with very low vswr.

If you are in a metrology lab, that may be true. But "connectors" are bad if you are concerned with very low VSWR, although beadless 7mm connectors and airline are great, but not too practical.

2090. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 07:33:52 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C91A3E0.583136D8@eznec.com>
Source record: 45628

This is the sort of discussion that could go on without end. But I should point out that there are several series of BNC connectors, some better than another when very flat SWR is an issue. (It isn't, in the application being asked about.) As I recall from the distant past, the UG-88E was a constant impedance connector, while some of the others of that series weren't. It's not a trivial job to measure the SWR through a connector itself. (That is, unless you're using a 75 ohm BNC in a 50 ohm system.) A poor apparent SWR is more likely due to a poorly installed connector than to the impedance discontinuity through the connector itself. I have in front of me a 1991 HP Microwave Test Accessories Catalog which shows the SWR of general purpose BNC connectors to be 1.3 up to 4 GHz. This is acceptable for nearly any general purpose application, and for most laboratory applications.

There's no doubt that any screw type connector, including TNC, is more consistent than any bayonet. I just maintain that this level of consistency is seldom required unless precision measurements are being made. I'd expect to find a threaded connector on any good signal generator both because of the improved consistency and also lower signal leakage. (Not because it has "flatter response".)

People like to sort things into binary groups, "good" and "bad". You'll see it in the discussions of antennas and nearly anything else. But "good" for one application is "bad" for another, and stating without qualification that BNC connectors are "no good" for use at 1 GHz is simply wrong for most applications.

At this point I'll retire from this thread. There's plenty of good information easily obtainable from the web for anyone seriously interested in this topic.

Roy Lewallen, W7EL

Gary Schafer wrote:
>
> It is not misinformation. A bnc connector does not have a flat
> impedance response through 1ghz. Yes they are fine for a lot of
> applications including 1ghz operation. Even a pl259 will work at
> 1ghz.
> But if you are concerned with flat response over the entire range as I
> pointed out a type N connector is supperior.
> Measure the vswr on some adaptors sometime, even at frequencies of 450
> mhz. They are anything but flat. will they work for a lot of
> applications, sure. But if you want very flat response for something
> like a spectrum analyzer, like he asked about, a type N is the better
> connector.

>
> I use bnc connectors and adaptors much of the time too. They are handy
> and easy to find attenuators for etc. But look at any good signal
> generator that operates at 1 ghz. It will have a type N connector. The
> reason,, Because it has a flater response at 1 ghz.
>
> If it is for general use and you are not concerned with any serious
> measurements at 1ghz then bnc is fine.
>
> 73
> Gary K4FMX

2091. Re: imput/Output impedance of JFET Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 07:41:37 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c91a955$0$24894@echo-01.iinet.net.au>
Source record: 45630

Bill
It depends on the configuration of the mixer and which port you are
referring to.
In an amp circuit with a common source configuration the input impedance
would be high and would normally be set by a resistor to ground.
In a common gate (grounded gate) configuration the input impedance will
depend on drain current and FET gm. In fact this is a good circuit where you
want a wideband predictable load (eg post mixer amp).
In a mixer I presume both situations will apply as you will probably be
applying RF to the gate and LO to the source. (no doubt there will be more
learned responses to enlighten us)
You could enter the circuit into a simulation package and see what you get
(I dont know how good the simulation is in this situation)

Richard

"Skipp" <skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote in message
news:a6r2d6$1ld$1@woodrow.ucdavis.edu...
> In generic common circuits, the input impedance is high and the output
> would be moderate to low. It all has to do with the way it's placed into
> a circuit. Parts around it, change the impedances.
>
> The mpf-102 is/was used extensively in hf and vhf circuits, I'm sure many
> examples can be found in ARRL Handbooks.
>
> cheers
> skipp
> http://sonic.ucdavis.edu
>
> : Bill Harbour <w.harbourjr@worldnet.att.net> wrote:
> : I'm using a MPF102 JFET mixer in a 30m receiver project. Does anyone
> : have any idea of the input and output impedances in this application??
>
> : Tnx,
>
> : Bill Harbour

2092. Re: Radiation from monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 07:54:30 UTC
From: bpasaric@mac.com
Message-ID: <1f92ute.e043foglb0m4N%bpasaric@mac.com>
Source record: 45570

Gary Glaenzer <nobulltrans@mchsi.com> wrote:

> without knowing the sensitivity of the film-stock to X-rays, this
> 'experiment' proves absolutely nothing

Not exactly. It proves that there is an unknown amount of radiation near the monitor screen. The next logical question is: "How strong are they?" The answer should be in adequate measuring units. The general radiation in the room is musch lower. I let a piece of the same film in a black box in my drawer for a month, then I developed it. It was completely transperent, i.e. unexposed. Conclusion: There is a substantial measurable amount of radiation near the monitor screen.
Bozidar, 9a2hl

2093. Re: Radiation from monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 07:54:31 UTC
From: bpasaric@mac.com
Message-ID: <1f92v0p.27hz761ji9yrkN%bpasaric@mac.com>
Source record: 45569

<deyoreo@re.ray.com> wrote:

> I did the same once with a color tv. Only needed about 30 secs. I had
> a sheet of photo paper inside the front cover of a magazxine. I put my
> hand over it. When I developed it, I had a fuxxy xray of my hand and
> where my hand wasn't, the ink in the printed blocked enough so it was
> a revese picture of the cover with my xrayed hand super imposed.
> This was a 1970's color tv.

Hi!
Your smart experiment indicates that the radiation could be stronger than I suspected. I did not try to find out the minimum time needed to darken the film. You say 30 seconds. The next time I will take that time. In fact the TV cathode ray tube is technically very similar to the X-ray tube. There is a strong beam of electrons from the cathode hitting a highly positive metal anode. Secondary products are then beaten out, i.e. the X-rays. The screen is conductive and could stand for the metal anode. You have proved that a monitor can be used as an improvised X-ray machine.

Here in Europe the X-ray machine is called 'Roendgen' after its inventor Wilhelm Roendgen, who has also discovered the X-rays (Nobel prize 1901). The measuring unit is 1 Rg (roendgen). When the impact of X-rays on people is considered, the time of exposure is essential, so the measuring unit is Rg/h (roendgen-hours). The other day I looked into a Medical school textbook for a "roendgenologist". Under "professional risks" they say: possible sterilization caused by X-rays. Those people in hospitals are protected by lead walls and stand at least 10 feet away. Our children sit 1 or 2 feet from their monitors. Am I a panicker?

Now, what I am trying to find out in this news group is the million-dollar question: "Our childern sit in front of their computers for hundreds of hours. Could it happen that they become sterilized, or - when they grow up - that they get monster and reterded children like those we can see around Chernobil today?" Exact numbers are needed; funny anegdotes do not help here. Judging by some answers I have touched a wasp nest. I am aware that producing monitors is a multi-billion dolar business today. Who should I believe to?
Greetings.
Bozidar, 9A2HL

2094. You have got to build it to believe it!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 07:59:43 UTC
From: braincambre500@yahoo.com
Message-ID: <85a87c6c.0203142359.47ea8db4@posting.google.com>
Source record: 45629

Hello all,

I like to come to forums where the interest is in radio. I have just made my first website and have all the information one needs in order to make a truly remarkable circuit. I call it the "Radio Shack Special".

It is really a super-regenerative receiver that I had doctored up so much (by taken off component after component) that all if left is 12 components in the receiver itself. The sensitivity, selectivitiy and great audio output is truly an understatement.

You have to go to the site and see for yourself. I have laid down ALL the criteria for one to get it up and running.

I quess it is these simple projects that just become so fascinating.

Usually, with FM, all sorts of detectors, discrimators..etc. you need to have.

This little gem is shining so bright...I listen to it every night before I go to bed....just for the fact that it is picking up FM.....and sensitivity!

Pedro was the first person to try it.....he started the journey...and now has finished it and added fine touches to the outer jacket as to make it look so professional...

If you are interested in this.....you need to go to my website and take a look at the amazing "Radio Shack Special". I call it that because all of the components may be purchased there....except for the tuning capacitor.

...I do want to thank each and every one for the time given.

...your friend, Patrick

2095. Want an amazing week-end project to make....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 08:04:58 UTC
From: braincambre500@yahoo.com
Message-ID: <85a87c6c.0203150004.750957bc@posting.google.com>
Source record: 45631

Hello all,

I like to come to forums to put out free things I have to offer.

To make a long story short, if you are fascinated by FM and want the simplist of all circuits available...you have to come to my site and see the amazing "Radio Shack Special".

The sensitivity, selectivity and great audio output is an understatement. You have to build this little gem in order to appreciate it's shining beauty!

Take a break and go to:

http://braincambre500.freeservers.com

...I thank everyone for thier time...

...your friend, Patrick

2096. Re: You have got to build it to believe it!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 10:31:22 UTC
From: c.a.m@nospam.blueyonder.co.uk
Message-ID: <pbj39uknjhhepku4fqd1qg96t82omcvsfc@4ax.com>
Source record: 45632

wot web site ?

2097. Re: FRAUD ALERT....KB9YTV, bad trader

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 12:25:55 UTC
From: Presley Travis <presleytravis@nexet.net>
Message-ID: <3C91E853.BDE5CBA3@nexet.net>
Source record: 45633

update...

This is getting interesting, but not very...
Received an email from KB9YTV stating his bank
has an copy of an money order cashed by me that
he will soon have in his possession.
Totally false...

Regards,
KA4NNN
Presley Travis

Presley Travis wrote:

> On January 28th I agreed to purchase an Alinco DR-M06 , 6 meter
> tranceiver
> from KB9YTV, Ian Ben Steimle, 1003 LIncoln St, Greebay, Wisconsin 54303.
>
> I sent an Postal Money order Priority mail on Tuesday, January 29th
> 2002.
>
> I received radio on Friday February 8th...not working
>
> Februay 9th I notified Mr. Steimle and he agreed to refund the $185.00
>
> February 11th I returned radio and he received it February 13th,
> promising
> overnight refund of $185.00
>
> Several lies later we are without the refund a full month has passed and
>
> emails have ceased from KB9YTV.
>
> I have contacted the FBI Internet Fraud division and the Postal
> Inspector...
> and will continue to alert the Amateur Radio community...so that nobody
> else falls prey to KB9YTV
>
> Tnx & Vy 73,
> KA4NNN
> Presley Travis
> 324 Yanceyville Road
> Louisa, Virginia 23093
>
> My ebay ID is presleytravis@musician.org

> if you would care to check my feedback.
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2098. Toko Coil Numbers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 13:20:53 UTC
From: m0cem@aol.com
Message-ID: <dca0b959.0203150520.49cc6851@posting.google.com>
Source record: 45634

Does anybody have a cross reference list for the older Toko coil numbers, K1731 and 4921 in particular?

I tried to access the Bonex online catalogue, but it keeps giving me a virus alert (w32nimda). You don't want to go there!

Is there another comprehensive Toko catalogue somewhere?

Thanks
Dave m0cem

2099. Re: Amplifier noise AND dynamic range

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 13:25:30 UTC
From: Jeroen Belleman <Jeroen.Belleman@cern.ch>
Message-ID: <3C91F64A.5C6986FD@cern.ch>
Source record: 45635

Tom Bruhns wrote:
>
> [...]
> By the way, there was a discussion about a particularly low-noise
> amplifier on sci.electronics.design a few months ago. I wish I could
> provide a better pointer to it, but I'd have to go do a search to find
> it.

That would have been the thread I started. Go to Google - Groups and
search for "Low noise amplifier design". The subject was a 100k-100MHz
amplifier with 300pV/rtHz input-referred noise and a 50 Ohm input
impedance.

Jeroen Belleman

2100. Re: You have got to build it to believe it!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 13:49:25 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0203150549.6501e8d1@posting.google.com>
Source record: 45636

Wasn't this on here a month or so ago?

By the way, if he is so hot on this thing, why didn't he include his
web site address?

braincambre500@yahoo.com (Patrick) wrote in message
news:<85a87c6c.0203142359.47ea8db4@posting.google.com>...
> Hello all,
>
> I like to come to forums where the interest is in radio. I have just made my
> first website and have all the information one needs in order to make
> a truly remarkable circuit. I call it the "Radio Shack Special".
>
> It is really a super-regenerative receiver that I had doctored up so
> much (by taken off component after component) that all if left is 12
> components in the receiver itself. The sensitivity, selectivitiy and
> great audio output is truly an understatement.
>
> You have to go to the site and see for yourself. I have laid down ALL
> the criteria for one to get it up and running.
>
> I quess it is these simple projects that just become so fascinating.
>
> Usually, with FM, all sorts of detectors, discrimators..etc. you need to
> have.
>
> This little gem is shining so bright...I listen to it every night before
> I go to bed....just for the fact that it is picking up FM.....and sensitivity!
>
> Pedro was the first person to try it.....he started the journey...and
> now has finished it and added fine touches to the outer jacket as to make
> it look so professional...
>
> If you are interested in this.....you need to go to my website and
> take a look at the amazing "Radio Shack Special". I call it that because
> all of the components may be purchased there....except for the tuning
> capacitor.
>
> ...I do want to thank each and every one for the time
> given.
>
> ...your friend, Patrick

2101. Re: Radiation from monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 14:54:25 UTC
From: Gary Glaenzer <nobulltrans@mchsi.com>
Message-ID: <BWnk8.47161$uA5.52757@rwcrnsc51.ops.asp.att.net>
Source record: 45639

without knowing the sensitivity of the film-stock to X-rays, this
'experiment' proves absolutely nothing

"Bozidar Pasaric" <bpasaric@mac.com> wrote in message
news:rhbys2.1x5lusy1xf6cg0N%bpasaric@mac.com...
> I have made the following experiment: I took a PC monitor and switched
> it on. Then I took a new ordinary colour negative film. I went into a
> dark room and pulled out one half of it. The first half remained in its
> tin can, and I put the second half into its black plastic box. So the
> first half of the negative was protected by a tin box, and the second
> half was protected from light by a strong black plastic box. Then I
> stuck both the halves onto the middle of the monitor screen with some
> adhesive tape, and left it there for four hours. After that time I had
> both the halves developed. The first half from the tin box was
> completely transperent, i.e. unexposed, while the second one from the
> plastic box was completely black, i.e. exposed. Exposed to what?
> Obviously X-rays!!! I repeated this experiment with several other
> types of monitors, but the result was always the same.
>
> Factories never give any data of the X-radiation of their screens. How
> strong is it? Some people sit by the screen for 8 hours a day, 250
> workdays a year - year after year. How dangerous is it? Does anyone
> know something more about it? Why don't factories pulbish that
> radiation in radiation units? Any comments?
>
> Bozidar, 9A2HL

2102. Re: Radiation from monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 15:07:46 UTC
From: Peter O <peter.o@lennik.org>
Message-ID: <3C920E42.4F3A53B3@lennik.org>
Source record: 45640

Bozidar Pasaric wrote:
>
> I have made the following experiment: I took a PC monitor and switched
> it on. Then I bought an ordinary colour negative film. I went into a
> dark room and pulled out one half of it . The first half remained in its
> tin can, and I put the second half into its black plastic box. So the
> first half of the negative was protected by a tin box, and the second
> half was protectred from light by a strong black plastic box. Then I
> stuck both the halves onto the middle of the monitor screen with some
> adhesive tape, and left it there for four hours. After that time I had
> both the halves develeoped. The first half from the tin box was
> completely transperent, i.e. unexposed, while the second one from the
> plastic box was completely black, i.e. exposed. Exposed to what?
> Obviously X-rays!!! I repeated this experiment with several other
> types of monitors, but the result was always the same.
>
> Factories never give any data of the X-radiation of their screens. How
> strong is it? Some people sit by the screen 8 hours a day, 250 workdays
> a year - year after year. How dangerous is it? Does anyone know
> something more about it? Why factories do not pulbish that
> radiation in radiation units? Any comments?
>
> Bozidar, 9A2HL

There are rules established for this.
The tag on the back of my monitor states that it complies with DHHS
rules 21 CFR subchapter J.
So the factories do not have to publish these numbers because they have
to be lower that the values set in the rules.
These rules obviously exist for your health and safety.

If you are scared of radiation then I would suggest you dig a very deep
bunker in the ground, plate the walls with 15 centimeters of lead. Step
inside and close the door.
But do not come complain about lead-poissioning.

Radiation is a naturally occuring phenomenon and we can handle some
without a problem, however we need to make sure the amount remains
within limits, and that is why we have the rules.

Just a little anecdote about radiation.
Not so far from here a storage complex for low-grade nuclear waste has
been build.
The people living in the direct neigborhood were very worried. So an
engineer volunteered to take some people on a tour of the facility with

a geiger-counter. Turns out the radiationlevels where higher at the entrance-gate then they were inside the complex. This ofcourse puzzled the engineer.
So in his free time the same engineer and some neighbours went out and tried to determine the cause of the radiation. It turned out to be a natual occurance of radioactive radon-gas.

You see people are too often scared because they do not know what they are dealing with, my advise to people who ask themselves this kind of questions would be to go and find somebody who knows and certainly never immediatly believe what the mainstream-media write about it. Because, trust me, they do not have a clue.

Peter O
http://www.lennik.org

[Doctors and Bartenders], We both get the same two kinds of customers -- the living and the dying.
-- Dr. Boyce, "The Menagerie" ("The Cage"), stardate unknown

2103. Re: Very simple CW-generator scheme pls !!??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 15:13:19 UTC
From: mikea@mikea.ath.cx
Message-ID: <jcok8.4384$X14.794232996@newssvr17.news.prodigy.com>
Source record: 45641

Ronny <tryit3@hotmail.com> wrote:
: Hi dr OMs,

: Thanks for reading this mail. It is about the following. As a teacher i want
: to do an experiment on the Doppler-effect. For that purpose i would like to
: make a very little circuit (based on a NE555?) which generates a sinuswave
: that is heard through a little loudspeaker and that can be built in in a
: little ping-pong ball. By moving or throwing that into the classroom, i want
: to measure the Doppler effect.
: As a ham, i am sure that someone has a scheme of a CW practise generator
: that does want i need !
: So if you can help me, pls let me know. My students and myself are gratefull
: for any tip !

Radio Shack sells a 1-piece speaker/oscillator that fits in a 1
cm. cube and can be driven with 3VDC or so. It costs under $10,
and puts out a pretty constant 3KHz or so; driving voltage does
not appear to change the frequency as long as it's over the
threshold required to get the thing to oscillate.

Your local consumer electronics parts houses may have something
of the sort.

--
Einstein argued that there must be simplified explanations of nature, because
God is not capricious or arbitrary. No such faith comforts the software
engineer.
- Fred Brooks, Jr.

2104. Re: Very simple CW-generator scheme pls !!??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 15:53:34 UTC
From: Ronny <tryit3@hotmail.com>
Message-ID: <2Ook8.7815$DE4.954@afrodite.telenet-ops.be>
Source record: 45642

Hi Mike !

Thanks for the tip ! It should really be that what i am looking for ... unfortunately i live in Belgium and Radio Shack has closed all his stores some years ago ... Maybe i can find the scheme so that i can assemble it myself.

73s de ON4CAy
Ronny
www.on4cay.com

"Mike Andrews" <mikea@mikea.ath.cx> wrote in message news:jcok8.4384$X14.794232996@newssvr17.news.prodigy.com...
> Ronny <tryit3@hotmail.com> wrote:
> : Hi dr OMs,
>
> : Thanks for reading this mail. It is about the following. As a teacher i want
> : to do an experiment on the Doppler-effect. For that purpose i would like to
> : make a very little circuit (based on a NE555?) which generates a sinuswave
> : that is heard through a little loudspeaker and that can be built in in a
> : little ping-pong ball. By moving or throwing that into the classroom, i want
> : to measure the Doppler effect.
> : As a ham, i am sure that someone has a scheme of a CW practise generator
> : that does want i need !
> : So if you can help me, pls let me know. My students and myself are gratefull
> : for any tip !
>
> Radio Shack sells a 1-piece speaker/oscillator that fits in a 1
> cm. cube and can be driven with 3VDC or so. It costs under $10,
> and puts out a pretty constant 3KHz or so; driving voltage does
> not appear to change the frequency as long as it's over the
> threshold required to get the thing to oscillate.
>
> Your local consumer electronics parts houses may have something
> of the sort.
>
> --
> Einstein argued that there must be simplified explanations of nature, because
> God is not capricious or arbitrary. No such faith comforts the software

> engineer.
> - Fred Brooks, Jr.

2105. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 16:19:39 UTC
From: k8do@diamondcs.net
Message-ID: <5f61f1ab.0203150819.124ff807@posting.google.com>
Source record: 45643
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

Yeah Jim... You are supposed to be arguing about who has been on RAH longer, or who brought the HOMEBREW beer to Pville, or in a pee contest over your degrees, etc... You are not supposed to be contaminating the group with postings about actually building something...

BTW, I have been in and out lately so I'm a bit behind on this one... SO, gimme a brief description of the stages and general idea how you you will measure the amplitude depth on each tone... Gonna use a catv bipolar for the rf stage? etc..

Denny

"Jim Weir" <jim@rst-engr.com> wrote in message news:<u91o22rruku996@corp.supernews.com>...
> I'm getting ready to design a homebuilt (kit) ILS receiver (VOR/LOC/GS) for
> aircraft and that's OT???
>
> Jim
>
>
>
> >
> > Ditto here. I enjoyed this thread, even if it is a bit OT
> > for rec.aviation.homebuilt where I'm reading it.
> >

2106. QUESTIONS on the noise generator in the ARRL's noise bridge circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 17:03:46 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0203150903.3ebf48e5@posting.google.com>
Source record: 45644
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I have some questions regarding the noise generator for the noise bridge circuit on page 27-25 in _The ARRL Antenna Book_ (layout at http://www.arrl.org/notes/hbk-templates/rxbridge.pdf). As you can see, the chief component of this is the NE555P chip (http://focus.ti.com/docs/prod/folders/print/ne555.html, http://www-s.ti.com/sc/ds/ne555.pdf).

The book says that this noise generator produces a 50% duty-cycle 1000-Hz square wave signal. This signal is applied to the cathode of the Zener diode and then sent on to the amplifier. So the NE555P chip produces the white noise and the Zener diode seems to be the mechanism on which this white noise is placed on a broadband RF carrier. I noticed that the port 4 (RESET) continuously receives 9V, presumably to ensure that the chip constantly resets and doesn't get stuck in one state (as some variation is needed to produce the pulses). Port 8, of course, needs 9V in order to keep the digital elements (flip-flop, BJT, and logic gates) running. Port 3, of course, is the output.

I wish the book described this circuit in more detail. My questions:
1. What does the 6800-ohm resistor between the VCC port and the DISCH port do? Does this influence the frequency of the white noise generator?
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3. What is the purpose of the 1800 ohm resistor between port 3 and the D3 Zener diode?
4. How exactly does the D3 Zener diode modulate the output of the noise generator onto a broad range of RF frequencies?

Jason Hsu, AG4DG
jason_hsu_802701@@@@yahoo.com

2107. Re: QUESTIONS on the noise generator in the ARRL's noise bridge circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 17:24:02 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <3C922E32.E7200727@dialpoint.net>
Source record: 45645
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

YOu need to read up on how the 555 IC works. The two 6800 resistors along with the capacitor determin the frequency the circuit oscillates. One resistor is the on time and the other is the off time. The 555 will not give an exect square wave output of equal on and off times. The diodes are placed in the circuit to help make the times nearly the same.

The 1800 resistor limits the current to the zener diode which is acting as a noise generator and also isolates the circuit so the biggest part of the noise will go to the output to the transistor amplifiers and not be shunt to the power source. The zener does not modulate the noise output but it is the noise generator. The 555 timer output is turning the zener noise off and on at around a 1000 hz rate.

Jason Hsu wrote:
>
> I have some questions regarding the noise generator for the noise
> bridge circuit on page 27-25 in _The ARRL Antenna Book_ (layout at
> http://www.arrl.org/notes/hbk-templates/rxbridge.pdf). As you can
> see, the chief component of this is the NE555P chip
> (http://focus.ti.com/docs/prod/folders/print/ne555.html,
> http://www-s.ti.com/sc/ds/ne555.pdf).
>
> The book says that this noise generator produces a 50% duty-cycle
> 1000-Hz square wave signal. This signal is applied to the cathode of
> the Zener diode and then sent on to the amplifier. So the NE555P chip
> produces the white noise and the Zener diode seems to be the mechanism
> on which this white noise is placed on a broadband RF carrier. I
> noticed that the port 4 (RESET) continuously receives 9V, presumably
> to ensure that the chip constantly resets and doesn't get stuck in one
> state (as some variation is needed to produce the pulses). Port 8, of
> course, needs 9V in order to keep the digital elements (flip-flop,
> BJT, and logic gates) running. Port 3, of course, is the output.
>
> I wish the book described this circuit in more detail. My questions:
> 1. What does the 6800-ohm resistor between the VCC port and the DISCH
> port do? Does this influence the frequency of the white noise
> generator?
> 2. What is the purpose of the 6800 ohm resistor and two 1N914 diodes
> between the TRIG and DISCH ports? My guess is that it is part of a
> feedback network used to generate the square wave.
> 3. What is the purpose of the 1800 ohm resistor between port 3 and
> the D3 Zener diode?
> 4. How exactly does the D3 Zener diode modulate the output of the
> noise generator onto a broad range of RF frequencies?

>
> Jason Hsu, AG4DG
> jason_hsu_802701@@@@yahoo.com

2108. Re: Radiation from monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 17:24:56 UTC
From: bpasaric@mac.com
Message-ID: <1f93lga.3jgf57fxt6m8N%bpasaric@mac.com>
Source record: 45594

Eamon Skelton <Xnospam@oceanfree.net> wrote:

> In article <rhbys2.1x5lusy1xf6cg0N%bpasaric@mac.com>, Bozidar Pasaric wrote:
>
> Any comments?
>
> The only comment I have is that you are a long way
> off-topic for this NG.
>
It was a homebrew experiment, wasn't it. And almost every ham uses an
electronic device called monitor, doesn't he?
Greetings,
Bozidar, 9A2HL

2109. Re: Radiation from monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 17:28:31 UTC
From: bpasaric@mac.com
Message-ID: <1f93loy.g3n34zmgrmfqN%bpasaric@mac.com>
Source record: 45595

Ian White, G3SEK <G3SEK@ifwtech.com> wrote:

>> You are a reasonably concerned parent - but you are also a radio
> amateur, with enough technical background to know that if you want to
> really understand something, you need to apply some numbers to it.
>
> >Now, what I am trying to find out in this news group is the
> >million-dollar question: "Our childern sit in front of their computers
> >for hundreds of hours. Could it happen that they become sterilized, or -
> >when they grow up - that they get monster and reterded children like
> >those we can see around Chernobil today?" Exact numbers are needed;
> >funny anegdotes do not help here.
>
> Exactly - and telling stories to scare yourself does not help either.
>
> >Judging by some answers I have touched
> >a wasp nest. I am aware that producing monitors is a multi-billion dolar
> >business today. Who should I believe to?
>
> Try the professionals -
> http://www.nrpb.org/publications/documents_of_nrpb/abstracts/absd5-2.htm
> concludes that:
>
> "X-ray emissions [received from monitors, at normal viewing distances]
> are thousands of times lower than normal background levels of ionising
> radiation."
>
> Try the same experiment with the film at a normal viewing distance - you
> will see no effect.

Dear Ian!

Your answer is most informative and welcome. That is the answer I was looking for. Thank you for your time and effort to write it. Of course I am a worried parent - my son works as a professional computer graphics animator at the local TV station - surrounded by six powerful computers with huge colour monitors - for 8 hours every day and in a 10 x 10 foot room. Now I feel better. Thanks.

Bozidar, 9A2HL

2110. Re: QUESTIONS on the noise generator in the ARRL's noise bridge circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 18:08:53 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c92360b.935873@news.freeserve.net>
Source record: 45646
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I believe you have it the wrong way round..
The Diode generates the 'noise' and the 555 interrupts the 'noise'.
In reality, the 555 switches the power to the noise generating diode,
generating a signal that can be crudely called Amplitude Modulation
(I would call it a simple PCM without the 'code').
A carrier pulsed on a 1:1 on/off state will appear to be modulated if
it happens at an audible rate.
In switching at this 'rapid rate' harmonics will be generated..and
accuracy will be diminished.
I could be wrong.. I usually am
atb Mike W
--
On 15 Mar 2002 09:03:46 -0800, jason_hsu@my-deja.com (Jason Hsu)
wrote:

>I have some questions regarding the noise generator for the noise
>bridge circuit on page 27-25 in _The ARRL Antenna Book_ (layout at
>http://www.arrl.org/notes/hbk-templates/rxbridge.pdf). As you can
>see, the chief component of this is the NE555P chip
>(http://focus.ti.com/docs/prod/folders/print/ne555.html,
>http://www-s.ti.com/sc/ds/ne555.pdf).
>
>The book says that this noise generator produces a 50% duty-cycle
>1000-Hz square wave signal. This signal is applied to the cathode of
>the Zener diode and then sent on to the amplifier. So the NE555P chip
>produces the white noise and the Zener diode seems to be the mechanism
>on which this white noise is placed on a broadband RF carrier. I
>noticed that the port 4 (RESET) continuously receives 9V, presumably
>to ensure that the chip constantly resets and doesn't get stuck in one
>state (as some variation is needed to produce the pulses). Port 8, of
>course, needs 9V in order to keep the digital elements (flip-flop,
>BJT, and logic gates) running. Port 3, of course, is the output.
>
>I wish the book described this circuit in more detail. My questions:
>1. What does the 6800-ohm resistor between the VCC port and the DISCH
>port do? Does this influence the frequency of the white noise
>generator?
>2. What is the purpose of the 6800 ohm resistor and two 1N914 diodes
>between the TRIG and DISCH ports? My guess is that it is part of a
>feedback network used to generate the square wave.
>3. What is the purpose of the 1800 ohm resistor between port 3 and
>the D3 Zener diode?
>4. How exactly does the D3 Zener diode modulate the output of the

>noise generator onto a broad range of RF frequencies?
>
>Jason Hsu, AG4DG
>jason_hsu_802701@@@@yahoo.com

2111. Re: Radiation from monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 18:12:02 UTC
From: deyoreo@re.ray.com
Message-ID: <3c9238de.22548406@proxy.res.ray.com>
Source record: 45547

I did the same once with a color tv. Only needed about 30 secs. I had
a sheet of photo paper inside the front cover of a magazxine. I put my
hand over it. When I developed it, I had a fuxxy xray of my hand and
where my hand wasn't, the ink in the printed blocked enough so it was
a revese picture of the cover with my xrayed hand super imposed.
This was a 1970's color tv.
On Thu, 14 Mar 2002 15:21:42 +0100, bpasaric@mac.com (Bozidar Pasaric)
wrote:

>I have made the following experiment: I took a PC monitor and switched
>it on. Then I bought an ordinary colour negative film. I went into a
>dark room and pulled out one half of it . The first half remained in its
>tin can, and I put the second half into its black plastic box. So the
>first half of the negative was protected by a tin box, and the second
>half was protectred from light by a strong black plastic box. Then I
>stuck both the halves onto the middle of the monitor screen with some
>adhesive tape, and left it there for four hours. After that time I had
>both the halves develeoped. The first half from the tin box was
>completely transperent, i.e. unexposed, while the second one from the
>plastic box was completely black, i.e. exposed. Exposed to what?
>Obviously X-rays!!! I repeated this experiment with several other
>types of monitors, but the result was always the same.
>
>Factories never give any data of the X-radiation of their screens. How
>strong is it? Some people sit by the screen 8 hours a day, 250 workdays
>a year - year after year. How dangerous is it? Does anyone know
>something more about it? Why factories do not pulbish that
>radiation in radiation units? Any comments?
>
>Bozidar, 9A2HL

2112. Re: QUESTIONS on the noise generator in the ARRL's noise bridge circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 18:34:51 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <dle49u8qkrqd3ti8c7n4uiavg9r43tf16e@4ax.com>
Source record: 45548
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 15 Mar 2002 09:03:46 -0800, jason_hsu@my-deja.com (Jason Hsu)
wrote:

>I have some questions regarding the noise generator for the noise
>bridge circuit on page 27-25 in _The ARRL Antenna Book_ (layout at
>http://www.arrl.org/notes/hbk-templates/rxbridge.pdf). As you can
>see, the chief component of this is the NE555P chip
>(http://focus.ti.com/docs/prod/folders/print/ne555.html,
>http://www-s.ti.com/sc/ds/ne555.pdf).
>
>The book says that this noise generator produces a 50% duty-cycle
>1000-Hz square wave signal. This signal is applied to the cathode of
>the Zener diode and then sent on to the amplifier. So the NE555P chip
>produces the white noise and the Zener diode seems to be the mechanism
>on which this white noise is placed on a broadband RF carrier. I
>noticed that the port 4 (RESET) continuously receives 9V, presumably
>to ensure that the chip constantly resets and doesn't get stuck in one
>state (as some variation is needed to produce the pulses). Port 8, of
>course, needs 9V in order to keep the digital elements (flip-flop,
>BJT, and logic gates) running. Port 3, of course, is the output.
>
>I wish the book described this circuit in more detail. My questions:
>1. What does the 6800-ohm resistor between the VCC port and the DISCH
>port do? Does this influence the frequency of the white noise
>generator?
>2. What is the purpose of the 6800 ohm resistor and two 1N914 diodes
>between the TRIG and DISCH ports? My guess is that it is part of a
>feedback network used to generate the square wave.
>3. What is the purpose of the 1800 ohm resistor between port 3 and
>the D3 Zener diode?
>4. How exactly does the D3 Zener diode modulate the output of the
>noise generator onto a broad range of RF frequencies?
>
>Jason Hsu, AG4DG
>jason_hsu_802701@@@@yahoo.com

Hi Jason,

Your best and cheapest source of information about the characteristics
and application of the 555 come from the manufacturer. Motorola's old
handbooks and application notes are superb in this regard and go to
considerable extent for this chip alone.

The 555 establishes the dominant low frequency characteristic as the pulse edges are the compelling feature of harmonic generation. The Zener is the source of MF/HF/VHF noise. If you want to focus on anything, it should be the Zener. As an experiment, you could remove the Zener and couple this pulse through a transformer (about 1:10 or greater) and fire an NE-2 bulb which will be harmonic rich too (gas tubes are very noisy). I don't imagine that it would show any greater noise field however, unless you contrive to dump more power through the tube (or Zener for that matter, in that regard, try biasing it into greater or less conduction).

Keep in mind that the purpose of a white noise generator is to spread the AVAILABLE power EVENLY across the spectrum. The same power applied to any noise generator can only replicate this characteristic (unless the substitute is not equally suited for the purpose of noise generation). Again, focus on both the power applied, and the noise generation mechanism (there are many candidates). A mercury wetted reed relay feeding an Ampere to a one ohm resistor will overload you with harmonics of the reed's drive frequency. The principle benefit of such a suggestion lies in the exceptionally fast rise and fall time (sub nanosecond) and power handling capability. I won't go into the environmental risk and the possibility of this device becoming a controlled substance by the way.

73's
Richard Clark, KB7QHC

2113. Re: QUESTIONS on the noise generator in the ARRL's noise bridge circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 18:51:48 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.com>
Message-ID: <I1Bf0PBELkk8EA$B@ifwtech.com>
Source record: 45549
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Jason Hsu wrote:
>I have some questions regarding the noise generator for the noise
>bridge circuit on page 27-25 in _The ARRL Antenna Book_ (layout at
>http://www.arrl.org/notes/hbk-templates/rxbridge.pdf). As you can
>see, the chief component of this is the NE555P chip
>(http://focus.ti.com/docs/prod/folders/print/ne555.html,
>http://www-s.ti.com/sc/ds/ne555.pdf).
>
>The book says that this noise generator produces a 50% duty-cycle
>1000-Hz square wave signal. This signal is applied to the cathode of
>the Zener diode and then sent on to the amplifier. So the NE555P chip
>produces the white noise and the Zener diode seems to be the mechanism
>on which this white noise is placed on a broadband RF carrier.

The 555 produces a chopped DC supply to the zener (actually, avalanche)
diode. The diode produces the broadband RF noise.

> I
>noticed that the port 4 (RESET) continuously receives 9V, presumably
>to ensure that the chip constantly resets and doesn't get stuck in one
>state (as some variation is needed to produce the pulses). Port 8, of
>course, needs 9V in order to keep the digital elements (flip-flop,
>BJT, and logic gates) running. Port 3, of course, is the output.
>
>I wish the book described this circuit in more detail. My questions:
>1. What does the 6800-ohm resistor between the VCC port and the DISCH
>port do? Does this influence the frequency of the white noise
>generator?
>2. What is the purpose of the 6800 ohm resistor and two 1N914 diodes
>between the TRIG and DISCH ports? My guess is that it is part of a
>feedback network used to generate the square wave.

For information on how the 555 works, take a look at a
practically-oriented electronics text such as 'The Art of Electronics'
by Horowitz and Hill.

>3. What is the purpose of the 1800 ohm resistor between port 3 and
>the D3 Zener diode?

To set the current through the diode, and also to act as an RF 'choke'.

>4. How exactly does the D3 Zener diode modulate the output of the
>noise generator onto a broad range of RF frequencies?
>
D3 *is* the broadband noise generator.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.com/g3sek

2114. Re: Radiation from monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 20:24:55 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C925897.C402DC3D@eznec.com>
Source record: 45550

Could the film be getting exposed by high speed electrons rather than by X-rays?

Roy Lewallen, W7EL

2115. Re: Radiation from monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 21:02:15 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <ngnt6a.4ct.ln@my.linux.box>
Source record: 45574

In article <rhbys2.1x5lusy1xf6cg0N%bpasaric@mac.com>, Bozidar Pasaric wrote:

Any comments?

The only comment I have is that you are a long way
off-topic for this NG.

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

2116. FS: 100's of TUBES @ $.35 each

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 21:17:10 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <qxtk8.1433$J54.72710@news1.west.cox.net>
Source record: 45551
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.swap

Please email w6krc@arrl.net for detailed list.

2117. MANUAL SALE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 21:33:25 UTC
From: joeee1621@aol.com
Message-ID: <20020315163325.24736.00002373@mb-mv.aol.com>
Source record: 45552

NEED A MANUAL? WE PROBABLY HAVE IT. CONTACT US FOR A LIST-OVER 670 LISTINGS AT PRESENT-. WE PROBABLY HAVE A COPY OF WHAT YOU NEED. ALL MANUALS $16 SHIPPED UNLESS OTHERWISE NOTED.

2118. Re: You have got to build it to believe it!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-15 21:36:12 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0203151336.613c8759@posting.google.com>
Source record: 45553

jim.bolinger@lintek.aeroflex.com (JLB) wrote in message
news:<8d5ec8a2.0203150549.6501e8d1@posting.google.com>...
> Wasn't this on here a month or so ago?
>
> By the way, if he is so hot on this thing, why didn't he include his
> web site address?
>
Yes, he did post about it a while back, and I picked it apart here and
in rec.radio.shortwave Obviously, he just forgot to post the URL 9at
least he's dropped the "email me for details", and in his other post
made at the same time as this one, he did include the URL,
http://braincambre500.freeservers.com

He even has a comment about the "design" from Charles Kitchin, whose
work this "special" is derived from, on the site. It's chopped off,
but it sure looks like Charles isn't all that impressed.

Like I said when the guy posted a while back, there is nothing unique
about this design. And by stripping out the "extra parts", it just
reverts to the sort of circuit you see by the bucketfuls over the years.
The fact that it does give good performance is a reflection of
the technique of superregen, not this specific design. By making
the design more complicated, as Charles Kitchin has done, you actually
get improvements.

Michael

> braincambre500@yahoo.com (Patrick) wrote in message
news:<85a87c6c.0203142359.47ea8db4@posting.google.com>...
> > Hello all,
> >
> > I like to come to forums where the interest is in radio. I have just made my
> > first website and have all the information one needs in order to make
> > a truly remarkable circuit. I call it the "Radio Shack Special".
> >
> > It is really a super-regenerative receiver that I had doctored up so
> > much (by taken off component after component) that all if left is 12
> > components in the receiver itself. The sensitivity, selectivitiy and
> > great audio output is truly an understatement.
> >
> > You have to go to the site and see for yourself. I have laid down ALL
> > the criteria for one to get it up and running.
> >
> > I quess it is these simple projects that just become so fascinating.
> >

> > Usually, with FM, all sorts of detectors, discrimators..etc. you need to
> > have.
> >
> > This little gem is shining so bright...I listen to it every night before
> > I go to bed....just for the fact that it is picking up FM.....and sensitivity!
> >
> > Pedro was the first person to try it.....he started the journey...and
> > now has finished it and added fine touches to the outer jacket as to make
> > it look so professional...
> >
> > If you are interested in this.....you need to go to my website and
> > take a look at the amazing "Radio Shack Special". I call it that because
> > all of the components may be purchased there....except for the tuning
> > capacitor.
> >
> > ...I do want to thank each and every one for the time
> > given.
> >
> > ...your friend, Patrick

2119. Re: You have got to build it to believe it!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 00:22:54 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0203151622.932f118@posting.google.com>
Source record: 45555

jim.bolinger@lintek.aeroflex.com (JLB) wrote in message
news:<8d5ec8a2.0203150549.6501e8d1@posting.google.com>...

> Wasn't this on here a month or so ago?

>

> By the way, if he is so hot on this thing, why didn't he include his

> web site address?

This is his 4th posting.

The capabilities (sensitivity) and limitations (dismal
selectivity, oscillator radiation, AM/WBFM only) of
super-regenerative receivers are well known...

Laura Halliday VE7LDH "Que les nuages soient notre
Grid: CN89lg pied a terre..."
ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

2120. CW question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 00:26:09 UTC
From: wa0goz@arrl.net
Message-ID: <3C929121.4364@arrl.net>
Source record: 45556

Is there a CW newsgroup and if so how do I get to it? I did a Google search, but came up with nothing.

Thanks

Henry WA0GOZ

2121. Re: CW question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 01:56:57 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C92A693.3192@pop.removethistomailme.net>
Source record: 45557

wa0goz@arrl.net wrote:
>
> Is there a CW newsgroup and if so how do I get to it? I did a Google
> search, but came up with nothing.
>

There is, but you wouldn't believe how long it takes just to download
the message headers.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2122. Re: CW question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 02:05:05 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <3C92A852.6C3D8D44@amsat.org>
Source record: 45558

Henry there is one on QTH.net -- URL:
http://mailman.qth.net/

Several more at Yahoo Groups at URL:
http://groups.yahoo.com/search?query=cw
Type in cw and weed thru em.

Also see URL: http://groups.yahoo.com/search?query=morse+code
Type in Morse Code for searching.

I Don't subscribe to any of them so can't attest to quality

Hundreds more Ham Mail Lists at URL:
http://ac6v.com/mail.htm
--
73 From AC6V, Rod In Oceanside, CA
I doubt, therefore I might be!

AC6V Mega Ham Index at http://ac6v.com
AC6V Book For DXers at http://ac6v.com/DXSAMPLE.htm
==========
wa0goz@arrl.net wrote:

> Is there a CW newsgroup and if so how do I get to it? I did a Google
> search, but came up with nothing.
>
> Thanks
>
> Henry WA0GOZ

2123. power supply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 02:21:12 UTC
From: Joel Pelz <joelp@kconline.com>
Message-ID: <a6ua72$1i6m$1@nix2.kconline.com>
Source record: 45561

Hello

First off, let me state that I am new to amature radio and and an new to this news group. I was woundering if someone out there could help me build a power supply.

Joel Pelz
kc9atj
joelp@kconline.com

2124. RF Attenuator help needed?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 02:27:10 UTC
From: n4dav <>
Message-ID: <79b59ucudntdsbaltmvcu79skoe76bnd2k@4ax.com>
Source record: 45559

I need to attenuate about 800mw down to 200mw at 440 Mhz... I was going to constuct a pi filter as i've seen on the net, but i cant seem to find out how to figure out how many db this would be.. can anybody help? thanks!

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2125. Re: RF Attenuator help needed?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 02:49:53 UTC
From: Mark Little <mark@brigadoon.apana.org.au>
Message-ID: <itbu6a.if3.ln@chuckie.apana.org.au>
Source record: 45560

<n4dav> wrote in message news:79b59ucudntdsbaltmvcu79skoe76bnd2k@4ax.com...
> I need to attenuate about 800mw down to 200mw at 440 Mhz... I was
> going to constuct a pi filter as i've seen on the net, but i cant seem
> to find out how to figure out how many db this would be.. can anybody
> help? thanks!

db(atten) = 10 log (Pin/Pout)
db(atten) = 10 log (800mW/200mW) = 10 log 4 = 6dB attenuation

regards,
Mark.

2126. Re: CW question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 03:23:03 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u95fagi3uam1ac@corp.supernews.com>
Source record: 45563

The QTH group isn't too bad, but there is probably more CW info on QRP-L,
although if what you really want is just CW, the signal/noise ratio would be
pretty bad there.

I'm sort of squirrelly about the Yahoo groups, I get plenty enough spam, so
I can't comment on their content.

..

"AC6V" <ac6v@amsat.org> wrote in message news:3C92A852.6C3D8D44@amsat.org...
> Henry there is one on QTH.net -- URL:
> http://mailman.qth.net/
>
> Several more at Yahoo Groups at URL:
> http://groups.yahoo.com/search?query=cw
> Type in cw and weed thru em.

2127. Re: You have got to build it to believe it!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 03:27:06 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3C92BB90.8FD145F6@ay.com.au>
Source record: 45562

Laura Halliday wrote:

> This is his 4th posting.

Indeed it is, he got flamed each other time, just like this.

Give the poor chap a break, he has a nice beginners or weekend
relaxation project there. We aren't all EE grads, HAMs and interested
geeks come in all levels of ability, sometimes even the more skilled
like to slap together a minial circuit for fun, or to give to the kids
to play with.

Clearly the circuit borrows a lot from the work of many over the years,
and he credits Charles Kitchin at least, many don't.

> The capabilities (sensitivity) and limitations (dismal
> selectivity, oscillator radiation, AM/WBFM only) of
> super-regenerative receivers are well known...

You really should read some of Mr Kitchin's work if you believe that is
always true.

--
Alan Yates
http://www.vk2zay.net/

2128. Switchable amplifiers WITHOUT stray capacitance/inductance

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 04:58:40 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0203152058.d5a6e84@posting.google.com>
Source record: 45564
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I would like to build a modified version of the SWR noise bridge shown on page 27-25 of _The ARRL Antenna Book_. The schematic is available at http://www.qsl.net/wq1rp/noisebrg.htm, as the New England QRP group sells a kit.

One of the modifications I would like to make is an extra RF amplifier. More forward power means more reflected power given the same SWR. I want the noise from the noise bridge to be stronger relative to RF picked up by the antenna, because noise spikes or strong signals can foil my attempts to minimize the SWR on 80m and 40m.

At the same time, I would like this extra power to be OPTIONAL so that I don't have to waste the battery. This requires use of a switch.

However, I understand that the variable resistor and capacitor in the original design of this circuit are sources of stray capacitance and inductance. Would using a switch have a similar effect? If so, what would it take to minimize this?

Jason Hsu, AG4DG
jason_hsu_802701@@@yahoo.com
http://www.jasonhsu.com/ham_radio-technical.html

2129. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 05:43:49 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u95ms268dlil4c@corp.supernews.com>
Source record: 45565
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

I have no idea who you are, but this is the first miniflame of the thread,
and I'm not going to dignify it with further comment.

Jim

"Denny" <k8do@diamondcs.net> wrote in message
news:5f61f1ab.0203150819.124ff807@posting.google.com...
> Yeah Jim... You are supposed to be arguing about who has been on RAH
> longer, or who brought the HOMEBREW beer to Pville, or in a pee
> contest over your degrees, etc... You are not supposed to be
> contaminating the group with postings about actually building
> something...

2130. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 05:54:57 UTC
From: Bernie { the } Bunion <bernie@the_bunion.com>
Message-ID: <1503200222542081 41%bernie@the_bunion.com>
Source record: 45566
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

> Jim Weir <jim@rst-engr.com> wrote:

> I have no idea who you are, but this is the first miniflame of the thread,
> and I'm not going to dignify it with further comment.
>
> Jim
>
>
> >"Denny" <k8do@diamondcs.net> wrote in message

> > Yeah Jim... You are supposed to be arguing about who has been on RAH
> > longer, or who brought the HOMEBREW beer to Pville, or in a pee
> > contest over your degrees, etc... You are not supposed to be
> > contaminating the group with postings about actually building
> > something...

Jim I think that Denny has his tongue in his cheek and is commenting
about some of the general silliness in this group from some of the
sillier people..... Which in some peoples minds (possibly) includes
me.

Bernie { the } Bunion

2131. FS: 100's of TUBES @ $.35 each

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 06:44:29 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <hRBk8.1909$J54.194069@news1.west.cox.net>
Source record: 45567
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Please email w6krc@arrl.net for detailed list.

2132. Re: Switchable amplifiers WITHOUT stray capacitance/inductance

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 07:59:11 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <32u59u4it9qa5khns3i4ud6pms6pho5909@4ax.com>
Source record: 45568
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 15 Mar 2002 20:58:40 -0800, jason_hsu@my-deja.com (Jason Hsu)
wrote:

>
>However, I understand that the variable resistor and capacitor in the
>original design of this circuit are sources of stray capacitance and
>inductance. Would using a switch have a similar effect? If so, what
>would it take to minimize this?
>
>Jason Hsu, AG4DG

Hi Jason,

There are many issues with this design, one of which is that it is a fixed bridge and may not meet your expectations (the bridge is balanced against the 100 Ohm resistor on the "unknown" port). In other words, the layout is not conducive to balancing the arms of the bridge, but rather seeking the balance of what is applied and changing it. It is presumed that the Hi-Z of the "unknown" presents only the 100 Ohm to balance against R1 and C1 is adjusted to compensate for stray capacitance at the "unknown" port (you will never eliminate strays, it is more meaningful to know how to balance them).

Your question about the switch should be immaterial to the operation of the bridge as the source sees only the receiver as a load with a balanced load of R1-C1 and "unknown" in parallel. That is, stray capacitance to ground may affect HF/VHF performance (sensitivity) but not accuracy of balance aside from severe imbalances due to stray coupling to ground or in the coupling from source to R1-C1 and the "unknown" port. In this last regard, the principal culprit is found in the bridge's transformer and the very near connections shown by the layout (not a good idea). This is a rather fine point, one where accuracy is jeopardized, but the authors treat this project as a low accuracy (but adequate) device. Don't project problems of low noise amplitude until you build it.

It is a good begining, but the authors' conjecture that phase angle can be found is dreaming in technicolor with surround sound.

73's
Richard Clark, KB7QHC

2133. NBFM audio demodulation at high IFs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 08:45:39 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C93076B.6C10@pop.removethistomailme.net>
Source record: 45571
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Anyone got any tricks up their sleeves to allow NBFM (12 kHz channel spacing) demodulation directly at a 21.4 MHz IF, without the usual downconversion to 455 kHz?

I'm looking to use the Philips SA604A FM IF subsystem chip, and I have a good assortment of 21.4 MHz monolithic crystal filters to play with. It would be nice if one of those filters could be pressed into service as the equivalent of a very-high-Q quadrature tank circuit. The required quadrature Q for NBFM recovery at 21.4 MHz is on the order of 1000, too high for the usual LC circuit.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2134. Re: NBFM audio demodulation at high IFs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 09:30:08 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c931011.7327556@news.freeserve.net>
Source record: 45572
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Sat, 16 Mar 2002 08:45:39 GMT, John Miles
<jmiles@pop.removethistomailme.net> wrote:

>Anyone got any tricks up their sleeves to allow NBFM (12 kHz channel
>spacing) demodulation directly at a 21.4 MHz IF, without the usual
>downconversion to 455 kHz?
>
>I'm looking to use the Philips SA604A FM IF subsystem chip, and I have a
>good assortment of 21.4 MHz monolithic crystal filters to play with. It
>would be nice if one of those filters could be pressed into service as
>the equivalent of a very-high-Q quadrature tank circuit. The required
>quadrature Q for NBFM recovery at 21.4 MHz is on the order of 1000, too
>high for the usual LC circuit.
>
How about useing a 21.4 xtal in place of the LC tank. ISTR seeing this
used at 10.7 on the CA3089.

2135. Re: Radiation from monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 09:38:58 UTC
From: cwsouth <cwsouth@telusplanet.net>
Message-ID: <01c1ccce$b2919860$3a37b8a1@cwsouth>
Source record: 45573

Hi All:
Let us put some of this into perspective, and avoid fears born out of ignorance.
Prudence and caution are always useful when based on verifiable facts.

I have been an industrial radiographer and design radiation measurement equipment for some years.
I have had a my lifetime dosage plus and I am still here.

The radiation from the monitor is minor in comparison with an airline flight at 30,000 ft.

If you live in a brick house, your radiation dose is much higher than a wood house.
Radon from igneous rocks can cause major health hazards.

The naturally radioactive elements potassium, uranium and thorium have energies as high as 1.4 Mev or about 47 times the level of the maximum output of a CRT at maximum brightness.

Film triggers, due to radiation, at various levels due to the density cross section of the film being able to absorb a passing x-ray. Colour film's silver halide salts are not efficient at absorbing X-ray radiation.
Film Dosimeters have been dropped in favour of TLD (Thermo Luminescent Dosimeters) in Canada.

A Geiger Mueller tube will only pick up 1 % of the radiation emitted. And it must be tuned to the energy of the radiation for any reading to be useful. Expensive Scintillation radiation counters are only 7 % efficient.

Industrial x-ray film triggers at certain levels of energy (kilo electron volts or Mega electron volts.) and the rate of intensity is based on the amperage driving the emissions. As near as I remember my Radiography examinations. These levels are 50 to 1000 times more than medical x-ray film.

The absorbed dosage is also based energy of the radiation. For such things as Cobalt 60 (1.1 Mev), the body absorbs half of the radiation, the rest passes through to the person behind you. The radiation from smoke detectors is much more energetic and harmful than that of the CRT.
Americium 241, 7.5 Mev alpha particles!

Here is the good news:
If you double your distance from a radiation source, the radiation intensity drops by a factor of 4. Called the inverse square law. The distance from CRT face to the body may vary from 50 to 90 cm. So the distance makes a huge difference. Air does absorb many low level x-rays.

Additionally, the half of the dosage absorbed by the body is shrugged of over 24 hours.

The mean lethal dose LD 50 of the population is about 400 REM of radiation, if you get it all at once. Roentgens apply to the radiation and not the absorbed dose. To arrive at an absorbed dose, one must look at the energy of the radiation in Kev, times a compensating factor, and multiply that by the relative biological effectiveness (RBE) of the radiation involved. There are some newer SI conversions, forgive me, I've got grey hair.
By older regulations , general public (unmonitored), was not to be exposed to more than 500 milli REM over the a year period. based on 2,000 hours that relates to 0.25 milli REM per hour. Newer regulations have dropped that to 300 milli REM for the year.

And for the radiation level to make you sterile, it would kill you first, if delivered to the whole body. In the order of 2000 REM. The survivability rate is about 0.015 %.

The cumulating effects, well, the lifetime safe dose is 180 REM, used to be 250. based on 5 REM over 50 years. So sitting in front of your monitor for 300 years 24 hours a day at a distance of 1 cm from the tube; surface constantly, that may cause some problems.

The clothing you wear will help stop the 20- 30 kV radiation . The attenuation factor of the CRT glass is in the order of 4.66 for radiation at 20 Kev and 4.38 for 50 Kev.

Life is a risk, your ceramic coffee cup is just as hazardous, Klysatrons are much more lethal, more from voltage than radiation.

A company I consulted to, was plasma coating pipes, they used a 50 KV power supply at 2000 amps.
I mentioned a possible radiation hazard, and sure enough, they had to wear TLD dosimeters, but other dosimeters did not register such a low energy of radiation.
Have a look at
http://www.logwell.com/tech/nuclear/rad_cheat1.html

If one paranoid about radiation, then get LCD displays!
The stress of worrying about small hazards is much more damaging to ones health than the radiation.

Good health to all.
I just have to get my code speed back up and re-write that exam.
73
Clark Southoff

Bozidar Pasaric <bpasaric@mac.com> wrote in article
<1f923zx.d60uf71r3ph6eN%bpasaric@mac.com>...
> Roy Lewallen <w7el@eznec.com> wrote:
>
> > Could the film be getting exposed by high speed electrons rather than by

> > X-rays?
>
> Hi Roy,
> That would be a comforting alternative. However, I do not know if those
> electrons could penetrate through 6 milimeters of glass, 2 centimeters
> of air (on average, without any visible effect?) and 1 milimeter of
> plastic? Is 30 kV enough for that? I am afraid they are X-rays.
>
> BTW:I am afraid that the cumulative effects of time are being neglected
> when using monitors. The damaging effects of radiation depend on the
> level of radiation multiplied by the time a person is exposed. If those
> are really X-rays, a time limit for watching at near distance should be
> also stated on the CRT.
>
> Bozidar, 9a2hl
>
> P.S. I apologize for the double post. The server was out of work, so I
> tried again, and finally I got two posts.
>

2136. Re: Radiation from monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 11:58:58 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.com>
Message-ID: <fCghpzCCOzk8EAqe@ifwtech.com>
Source record: 45575

Bozidar Pasaric wrote:

>Your smart experiment indicates that the radiation could be stronger
>than I suspected. I did not try to find out the minimum time needed to
>darken the film. You say 30 seconds. The next time I will take that
>time. In fact the TV cathode ray tube is technically very similar to the
>X-ray tube. There is a strong beam of electrons from the cathode hitting
>a highly positive metal anode.

"Strong" beam of electrons, "highly" positive - but how strong, and how high?

Yes, a monitor screen does generate a small amount of low-energy x-rays - but the intensity (rate of photon generation) is proportional to the electron beam current, and the penetrating power (photon energy) is proportional to the accelerating voltage. The radiation dose rate (rate of energy deposition from photons absorbed) is proportional to these two factors multiplied together.

Both the beam current and the accelerating voltage in a monitor or a TV are much smaller than in x-ray machines than, so the radiation dose rate is also much less. Accelerating voltages in medical x-ray machines are typically 80-100kV in order to pass right through the body to the film on the other side without excessive scattering (which is why the x-ray picture using a TV looks fuzzy - the low-energy photons are being scattered). Beam currents in x-ray machines are of the order of 100mA in order to achieve exposure times of one second or less. This makes your TV look very feeble by comparison.

A small x-ray dose rate at the surface of the screen is tolerable because nobody is there to receive it. We say that "our children are glued to the computer screen" but fortunately that is not literally true!

Remember that x-rays are electromagnetic radiation, so the power density from a point source obeys the inverse square law. Further away from the screen, the dose rate is much less than the contact dose. The screen is not a point source, so it is not exactly inverse-square at relatively small distances; on the other hand, a TV viewed from across the room is a pretty good approximation to a point source.

>Here in Europe the X-ray machine is called 'Roendgen' after its inventor
>Wilhelm Roendgen, who has also discovered the X-rays (Nobel prize 1901).
>The measuring unit is 1 Rg (roendgen). When the impact of X-rays on
>people is considered, the time of exposure is essential, so the
>measuring unit is Rg/h (roendgen-hours).

The roentgen has not been used by professionals in Europe for at well over 20 years - the SI units are the Gray (energy deposition) and the Sievert (energy deposition weighted by biological effectiveness).

>The other day I looked into a
>Medical school textbook for a "roendgenologist". Under "professional
>risks" they say: possible sterilization caused by X-rays. Those people
>in hospitals are protected by lead walls and stand at least 10 feet
>away. Our children sit 1 or 2 feet from their monitors. Am I a panicker?
>
You are a reasonably concerned parent - but you are also a radio amateur, with enough technical background to know that if you want to really understand something, you need to apply some numbers to it.

>Now, what I am trying to find out in this news group is the
>million-dollar question: "Our childern sit in front of their computers
>for hundreds of hours. Could it happen that they become sterilized, or -
>when they grow up - that they get monster and reterded children like
>those we can see around Chernobil today?" Exact numbers are needed;
>funny anegdotes do not help here.

Exactly - and telling stories to scare yourself does not help either.

>Judging by some answers I have touched
>a wasp nest. I am aware that producing monitors is a multi-billion dolar
>business today. Who should I believe to?

Try the professionals -
http://www.nrpb.org/publications/documents_of_nrpb/abstracts/absd5-2.htm concludes that:

"X-ray emissions [received from monitors, at normal viewing distances] are thousands of times lower than normal background levels of ionising radiation."

Try the same experiment with the film at a normal viewing distance - you will see no effect.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.com/g3sek

2137. sa612 v passive mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 12:46:46 UTC
From: stephen zl1any <g_and_s_pearce@xtra.co.nz>
Message-ID: <3c933e18$1@zfree.co.nz>
Source record: 45576

Why did Elecraft use a passive ring mixer in the k2 rather than
something like a sa602 or sa612?

Thanks

http://www.zfree.co.nz

2138. Re: Radiation from monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 12:50:16 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a6vf43$hctbc$1@ID-124126.news.dfncis.de>
Source record: 45577

Ian quotes -
> "X-ray emissions [received from monitors, at normal viewing distances]
> are thousands of times lower than normal background levels of ionising
> radiation."
==========
Ian, quite reassuring. After many years, on and off, sitting before CRT's
it's something which has never bothered me very much. But are there any
other forms of possibly hazardous radiation emitted from computer monitors
which are NOT lower than normal background levels? It is appreciated you
are not a claimed expert in such matters but you may have have studied, more
than most of us, the many reports issued in recent years.

Yours, Reg.

2139. Re: RF Attenuator help needed?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 13:08:36 UTC
From: n4dav <>
Message-ID: <aug69uo0gcjl8kvm50mn5iuatpuptmnlpk@4ax.com>
Source record: 45578

Thanks!

On Sat, 16 Mar 2002 13:19:53 +1030, "Mark Little"
<mark@brigadoon.apana.org.au> wrote:

><n4dav> wrote in message news:79b59ucudntdsbaltmvcu79skoe76bnd2k@4ax.com...
>> I need to attenuate about 800mw down to 200mw at 440 Mhz... I was
>> going to constuct a pi filter as i've seen on the net, but i cant seem
>> to find out how to figure out how many db this would be.. can anybody
>> help? thanks!
>
>db(atten) = 10 log (Pin/Pout)
>db(atten) = 10 log (800mW/200mW) = 10 log 4 = 6dB attenuation
>
>regards,
>Mark.
>
>

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2140. Re: CW question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 13:16:46 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <ujgv6a.95u.ln@my.linux.box>
Source record: 45580

In article <3C929121.4364@arrl.net>, wa0goz@arrl.net wrote:
> Is there a CW newsgroup and if so how do I get to it? I did a Google
> search, but came up with nothing.
>
> Thanks

Not on my news server. The nearest I could find was
alt.fan.inspector.morse :-)

We are a long way OT for this group so I'll
shut up now.

73, Ed.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

2141. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 13:30:35 UTC
From: k8do@diamondcs.net
Message-ID: <5f61f1ab.0203160530.3eee0f4c@posting.google.com>
Source record: 45581
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

Ahh jeez, I hate it when a guy misses his chain being jerked...

No flames Jim, mini or otherwise... I never do that...

Denny

2142. Re: NBFM audio demodulation at high IFs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 14:15:06 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <Krlk8.12619$tP2.1083101@bgtnsc05-news.ops.worldnet.att.net>
Source record: 45582
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Digi-Key has some 21.4MHz filters that should fill the bill; the brand is ECS, out of the Midwest. They come in 2-pole and 4-pole sets. They are on page 461 of the January - April 2000 catalog. I have used their 10.7MHz filters as roofing filters, with good results.

Pete Gianakopoulos KE9OA

Mike W <mike@corn2.freeserve.co.uk> wrote in message news:3c931011.7327556@news.freeserve.net...
> On Sat, 16 Mar 2002 08:45:39 GMT, John Miles
> <jmiles@pop.removethistomailme.net> wrote:
>
> >Anyone got any tricks up their sleeves to allow NBFM (12 kHz channel
> >spacing) demodulation directly at a 21.4 MHz IF, without the usual
> >downconversion to 455 kHz?
> >
> >I'm looking to use the Philips SA604A FM IF subsystem chip, and I have a
> >good assortment of 21.4 MHz monolithic crystal filters to play with. It
> >would be nice if one of those filters could be pressed into service as
> >the equivalent of a very-high-Q quadrature tank circuit. The required
> >quadrature Q for NBFM recovery at 21.4 MHz is on the order of 1000, too
> >high for the usual LC circuit.
> >
> How about useing a 21.4 xtal in place of the LC tank. ISTR seeing this
> used at 10.7 on the CA3089.

2143. Re: You have got to build it to believe it!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 14:17:30 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <_tIk8.3793$PL1.157144@news2.east.cox.net>
Source record: 45583

There is a big difference between a regenerative receiver and a superregenerative.

Pete

"Alan Yates" <alany@ay.com.au> wrote in message news:3C92BB90.8FD145F6@ay.com.au...
> Laura Halliday wrote:
>
> > This is his 4th posting.
>
> Indeed it is, he got flamed each other time, just like this.
>
> Give the poor chap a break, he has a nice beginners or weekend
> relaxation project there. We aren't all EE grads, HAMs and interested
> geeks come in all levels of ability, sometimes even the more skilled
> like to slap together a minial circuit for fun, or to give to the kids
> to play with.
>
> Clearly the circuit borrows a lot from the work of many over the years,
> and he credits Charles Kitchin at least, many don't.
>
> > The capabilities (sensitivity) and limitations (dismal
> > selectivity, oscillator radiation, AM/WBFM only) of
> > super-regenerative receivers are well known...
>
> You really should read some of Mr Kitchin's work if you believe that is
> always true.
>
> --
> Alan Yates
> http://www.vk2zay.net/

2144. N.A.R.S.A. Rally Blackpool - 17th March

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 14:18:52 UTC
From: Martin John Hallsworth <Martin@NOSPAMg1gyc.demon.co.uk>
Message-ID: <1016288712.29942.0.nnrp-07.9e98acde@news.demon.co.uk>
Source record: 45585
Cross-posted to:
alt.ham-radio.vhf-uhf,alt.radio.amateur,alt.radio.scanner.uk,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

Hello all,

Do not forget that the N.A.R.S.A. Radio and Electronics exhibition / Rally
takes place tomorrow Sunday 17th March in Blackpool, Lancashire.
There is a Bring & Buy, all the usual traders commercial stands, plus
club stands from the organising societies.

Doors open at :-
10:30 am for the disabled visitors
11:00 am for the general public

Have a good St.Patrick's day and see there

Martin

2145. Re: QUESTIONS on the noise generator in the ARRL's noise bridge circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 14:21:45 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <ZxIk8.12622$tP2.1084008@bgtnsc05-news.ops.worldnet.att.net>
Source record: 45584
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

This might be a little off topic, but I have taken the broadband noise circuit from one of the other ARRL handbooks, and added enough gain after the diode. The result is a noise generator that will put out 0dBm from 10KHz to 1.3GHz, with a flat output across this range. I would be glad to share the circuit, along with board layouts to interested parties. What I use this circuit for is characterizing RF filters, along with a spectrum analyzer.

Pete Gianakopoulos KE9OA

Ian White, G3SEK <G3SEK@ifwtech.com> wrote in message news:l1Bf0PBELkk8EA$B@ifwtech.com...
> Jason Hsu wrote:
> >I have some questions regarding the noise generator for the noise
> >bridge circuit on page 27-25 in _The ARRL Antenna Book_ (layout at
> >http://www.arrl.org/notes/hbk-templates/rxbridge.pdf). As you can
> >see, the chief component of this is the NE555P chip
> >(http://focus.ti.com/docs/prod/folders/print/ne555.html,
> >http://www-s.ti.com/sc/ds/ne555.pdf).
> >
> >The book says that this noise generator produces a 50% duty-cycle
> >1000-Hz square wave signal. This signal is applied to the cathode of
> >the Zener diode and then sent on to the amplifier. So the NE555P chip
> >produces the white noise and the Zener diode seems to be the mechanism
> >on which this white noise is placed on a broadband RF carrier.
>
> The 555 produces a chopped DC supply to the zener (actually, avalanche)
> diode. The diode produces the broadband RF noise.
>
> > I
> >noticed that the port 4 (RESET) continuously receives 9V, presumably
> >to ensure that the chip constantly resets and doesn't get stuck in one
> >state (as some variation is needed to produce the pulses). Port 8, of
> >course, needs 9V in order to keep the digital elements (flip-flop,
> >BJT, and logic gates) running. Port 3, of course, is the output.
> >
> >I wish the book described this circuit in more detail. My questions:
> >1. What does the 6800-ohm resistor between the VCC port and the DISCH
> >port do? Does this influence the frequency of the white noise
> >generator?
> >2. What is the purpose of the 6800 ohm resistor and two 1N914 diodes
> >between the TRIG and DISCH ports? My guess is that it is part of a
> >feedback network used to generate the square wave.
>

> For information on how the 555 works, take a look at a
> practically-oriented electronics text such as 'The Art of Electronics'
> by Horowitz and Hill.
>
> >3. What is the purpose of the 1800 ohm resistor between port 3 and
> >the D3 Zener diode?
>
> To set the current through the diode, and also to act as an RF 'choke'.
>
> >4. How exactly does the D3 Zener diode modulate the output of the
> >noise generator onto a broad range of RF frequencies?
> >
> D3 *is* the broadband noise generator.
>
> --
> 73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
> 'In Practice' columnist for RadCom (RSGB)
> http://www.ifwtech.com/g3sek

2146. Re: imput/Output impedance of JFET Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 14:30:48 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <sGIk8.12629$tP2.1085188@bgtnsc05-news.ops.worldnet.att.net>
Source record: 45586

This could be a little off, but what I do is calculate the Thevinem impedance of the circuit, by calculating the parallel resistance of Rd, and (Rs in series with the channel resistance). This could be derived by measuring Vd, Vs, and the voltage drop across the JFET. I have found that a good rule of thumb when selecting the Drain/Source resistors is to make Rs about 25% to 33% of Rd, if you want the operating point of Vd to be approximately (Vcc/2). I have used this technique when embedding a JFET between a couple of crystal filters, and it has worked ok.
If I am off base, feel free to correct me folks!

Pete Gianakopoulos KE9OA

Richard Hosking <zaprichardh@iinet.net.au(remove the zap)> wrote in message news:3c91a955$0$24894@echo-01.iinet.net.au...
> Bill
> It depends on the configuration of the mixer and which port you are
> referring to.
> In an amp circuit with a common source configuration the input impedance
> would be high and would normally be set by a resistor to ground.
> In a common gate (grounded gate) configuration the input impedance will
> depend on drain current and FET gm. In fact this is a good circuit where you
> want a wideband predictable load (eg post mixer amp).
> In a mixer I presume both situations will apply as you will probably be
> applying RF to the gate and LO to the source. (no doubt there will be more
> learned responses to enlighten us)
> You could enter the circuit into a simulation package and see what you get
> (I dont know how good the simulation is in this situation)
>
> Richard
>
>
> "Skipp" <skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote in message
> news:a6r2d6$1ld$1@woodrow.ucdavis.edu...
> > In generic common circuits, the input impedance is high and the output
> > would be moderate to low. It all has to do with the way it's placed into
> > a circuit. Parts around it, change the impedances.
> >
> > The mpf-102 is/was used extensively in hf and vhf circuits, I'm sure many
> > examples can be found in ARRL Handbooks.
> >
> > cheers
> > skipp

> > http://sonic.ucdavis.edu
> >
> > : Bill Harbour <w.harbourjr@worldnet.att.net> wrote:
> > : I'm using a MPF102 JFET mixer in a 30m receiver project. Does anyone
> > : have any idea of the input and output impedances in this application??
> >
> > : Tnx,
> >
> > : Bill Harbour
>
>

2147. Re: Toko Coil Numbers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 14:32:50 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <a6vl2h$j5l$1@paris.btinternet.com>
Source record: 45587

"M0CEM" <m0cem@aol.com> wrote in message
news:dca0b959.0203150520.49cc6851@posting.google.com...
> Does anybody have a cross reference list for the older Toko coil
> numbers, K1731 and 4921 in particular?
>
> I tried to access the Bonex online catalogue, but it keeps giving me a
> virus alert (w32nimda). You don't want to go there!
>
> Is there another comprehensive Toko catalogue somewhere?
>
> Thanks
> Dave m0cem

The Toko web site?

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.con
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

2148. FS: 100's of TUBES @ $.35 each

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 15:05:55 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <nbJk8.2748$J54.267413@news1.west.cox.net>
Source record: 45588
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Please email w6krc@arrl.net for a detailed list.

2149. Re: sa612 v passive mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 16:02:54 UTC
From: Woody <woody.white@att.net>
Message-ID: <3C932773.CBDF6DCE@att.net>
Source record: 45589

Stephen,

Generaly speaking...
Active mixers (like the 602/612) can provide conversion gain unlike a diode ring mixer which typically has about a 6 db loss. Active mixers also require much lower local oscillator drive. These are nice features. OTOH, the diode ring mixers can handle a much larger input signal range. If performance is the primay criterium (over cost), the diode mixer is the one to use inspite of the need for a higher L.O. injection level and more system gain (to balance out it's loss).
73, Woody
---
stephen zl1any wrote:
>
> Why did Elecraft use a passive ring mixer in the k2 rather than
> something like a sa602 or sa612?
>
> Thanks
>
> http://www.zfree.co.nz

--
My website: http://woody.white.home.att.net/
WB4QXE - Homebrew Ham/Electronics Projects &
eclectic Scanning Electron Microscope Images

2150. Re: NBFM audio demodulation at high IFs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 16:48:31 UTC
From: Kijoma <bill_news@kSiPjAoMma.com>
Message-ID: <3c93649e$1_1@news1.meganetnews.com>
Source record: 45590
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

HI,

You can use a crystal or a ceramic resonator, detected audio levels with a
normal quad coil are low but could be useable.

another option would be a synchronous FM detector using D type latches and a
21.4MHz oscillator. This works in a similar way to the
"phase detector on PLLs", it generates error pulses with deviation from
centre frequency, you just need an integrator (R/C network to turn that back
into the analog waveform afterwards.

Have used this circuit myself.

you could also try a PLL FM detector too.

--
Bill Lewis
Engineering Director
Kijoma Solutions Ltd
RF - Analogue - Digital - Software
Electronic Product Design & Consultancy
Email : Bill.Lewis_@_kijoma.com (removes the _'s)

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
news:3c931011.7327556@news.freeserve.net...
> On Sat, 16 Mar 2002 08:45:39 GMT, John Miles
> <jmiles@pop.removethistomailme.net> wrote:
>
> >Anyone got any tricks up their sleeves to allow NBFM (12 kHz channel
> >spacing) demodulation directly at a 21.4 MHz IF, without the usual
> >downconversion to 455 kHz?
> >
> >I'm looking to use the Philips SA604A FM IF subsystem chip, and I have a
> >good assortment of 21.4 MHz monolithic crystal filters to play with. It
> >would be nice if one of those filters could be pressed into service as
> >the equivalent of a very-high-Q quadrature tank circuit. The required
> >quadrature Q for NBFM recovery at 21.4 MHz is on the order of 1000, too
> >high for the usual LC circuit.
> >
> How about useing a 21.4 xtal in place of the LC tank. ISTR seeing this
> used at 10.7 on the CA3089.

2151. Re: You have got to build it to believe it!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 16:58:20 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3C9379B4.DCC8A816@ay.com.au>
Source record: 45591

Uncle Peter wrote:
>
> There is a big difference between a regenerative receiver and a
> superregenerative.

Well, not /that/ much, a super-regenerative receiver is like a normal regen with a gain control being racked up and down really fast. The main difference is selectivity, swooshing the gain up and down obviously widens it as there is less Q-boosting from the shorter period of negative resistance.

Super's are also /much/ more sensitive, like 30dB better, but that comes at a price, basically of sampling the wanted signal at the quenching frequency and collecting everything inside the quenching sidebands, and any harmonics of it.

Yes, you can't really do CW/SSB on a super-regen, but you can do NBFM if you try hard, and CW/SSB is possible if you back them off into normal regeneration.

--
Alan Yates
http://www.vk2zay.net/

2152. Re: Switchable amplifiers WITHOUT stray capacitance/inductance

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 17:07:25 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0203160907.4fe06733@posting.google.com>
Source record: 45592
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

jason_hsu@my-deja.com (Jason Hsu) wrote in message
news:<f7d9a152.0203152058.d5a6e84@posting.google.com>...
> I would like to build a modified version of the SWR noise bridge shown
> on page 27-25 of _The ARRL Antenna Book_. The schematic is available
> at http://www.qsl.net/wq1rp/noisebrg.htm, as the New England QRP group
> sells a kit.
>
> One of the modifications I would like to make is an extra RF
> amplifier. More forward power means more reflected power given the
> same SWR. I want the noise from the noise bridge to be stronger
> relative to RF picked up by the antenna, because noise spikes or
> strong signals can foil my attempts to minimize the SWR on 80m and
> 40m.
>
> At the same time, I would like this extra power to be OPTIONAL so that
> I don't have to waste the battery. This requires use of a switch.
>
> However, I understand that the variable resistor and capacitor in the
> original design of this circuit are sources of stray capacitance and
> inductance. Would using a switch have a similar effect? If so, what
> would it take to minimize this?
>
> Jason Hsu, AG4DG
> jason_hsu_802701@@@yahoo.com
> http://www.jasonhsu.com/ham_radio-technical.html

You really need to understand how the noise bridge works, before you
start modifying it.

You have a bridge, consisting of T1, C1/C2, and R1. Your receiver is
the level indicator. You have an unknown impedance, which would often
be the antenna. And you need a signal source.

You can read up on bridges, in books like the ARRL Handbook. The
basics is the same as a resistive bridge, though in the case of the noise
bridge you are dealing with more complex components.

But the basic idea is that by adjusting one leg of the bridge, you balance
it with the leg with the unknown impedance. When the level indicator
is at it's mimimum, you have balance. Since you can calibrate the
components in the bridge, then you can read from them the value of the
unknown impedance.

I passed over the signal source, deliberately. You want a signal
at the frequency where you are operating. If you go looking, you will

find this sort of bridge with the signal source being a low power transmitter, or even the station transmitter. The problem with this is that you need to retune it as you move in frequency; this may mean a bandswitching unit if the signal source is built into the bridge, and unless you put a lot of effort into it, you'll have to keep retuning things in order to keep the signal in the passband of the receiver.

So at one point, someone came up with the idea of a white noise source as the signal source. It puts out more or less constant level signal throughout a large slice of spectrum, so you don't need to retune the signal source.

As for the level indicator, I'm sure if you looked, you'd find similar bridges that used things other than the station receiver. But the usual ham does have a receiver, so it saves costs. Otherwise, you'd need to build up some sort of sensitive level indicator.

Take a look at the 2001 ARRL Handbook, there's a different noise bridge in there. The circuit is probably in other recent editions. You will find the same basic circuit, but with a different implementation. The bridge portion is the same. But it uses an IC to amplify the noise generator, which is a zener diode like the one in the Antenna book. The significant difference is that the noise source is not modulated. (In one of these threads of yours, someone suggested modulating the noise source to help in finding the null. That's what the 555 in the Antenna book schematic is doing.)

And a noise bridge has nothing to do with adjusting SWR. It's a piece of test equipment for measuring the impedance of the antenna (or some other device). The variable R and C are your readouts. The only thing you can adjust to improve things is by fiddling with the actual antenna.

Michael VE2BVW

2153. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 17:29:11 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u9706jg69dr46e@corp.supernews.com>
Source record: 45593
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

Oopsie *blush*...I hate it when I'm the last one to get it {;-)

Jim

"Denny" <k8do@diamondcs.net> wrote in message
news:5f61f1ab.0203160530.3eee0f4c@posting.google.com...
> Ahh jeez, I hate it when a guy misses his chain being jerked...
>
> No flames Jim, mini or otherwise... I never do that...
>
> Denny

2154. Re: Radiation from monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 17:46:24 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.com>
Message-ID: <jpsej0AwT4k8EA$Y@ifwtech.com>
Source record: 45497

Reg Edwards wrote:
>Ian quotes -
>> "X-ray emissions [received from monitors, at normal viewing distances]
>> are thousands of times lower than normal background levels of ionising
>> radiation."
>==========
>Ian, quite reassuring. After many years, on and off, sitting before CRT's
>it's something which has never bothered me very much. But are there any
>other forms of possibly hazardous radiation emitted from computer monitors
>which are NOT lower than normal background levels? It is appreciated you
>are not a claimed expert in such matters but you may have have studied, more
>than most of us, the many reports issued in recent years.

Start at the same place that the above quote came from:
http://www.nrpb.org/publications/documents_of_nrpb/abstracts/absd5-2.htm

This is an authoritative report by the UK 'radiation watchdog'
organization on hazards from Visual Display Units. (However, the subject
of 'radiation' - any kind - being what it is, you can also search the
web to find many contrary viewpoints.)

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.com/g3sek

2155. Re: You have got to build it to believe it!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 17:58:18 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <_ILk8.3970$PL1.199229@news2.east.cox.net>
Source record: 45596

Yep. And not much more difference for a superhet.

Pete

"Alan Yates" <alany@ay.com.au> wrote in message
news:3C9379B4.DCC8A816@ay.com.au...
> Uncle Peter wrote:
> >
> > There is a big difference between a regenerative receiver and a
> > superregenerative.
>
> Well, not /that/ much, a super-regenerative receiver is like a normal
> regen with a gain control being racked up and down really fast. The
> main difference is selectivity, swooshing the gain up and down obviously
> widens it as there is less Q-boosting from the shorter period of
> negative resistance.
>
> Super's are also /much/ more sensitive, like 30dB better, but that
> comes at a price, basically of sampling the wanted signal at the
> quenching frequency and collecting everything inside the quenching
> sidebands, and any harmonics of it.
>
> Yes, you can't really do CW/SSB on a super-regen, but you can do NBFM
> if you try hard, and CW/SSB is possible if you back them off into normal
> regeneration.
>
> --
> Alan Yates
> http://www.vk2zay.net/

2156. Re: Switchable amplifiers WITHOUT stray capacitance/inductance

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 18:26:43 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0203161026.2f648b2c@posting.google.com>
Source record: 45498
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

NOTE: My version of the noise bridge will NOT have the variable resistor and capacitor that the original has. I will operate it by hooking it up, adjusting the antenna for minimum SWR for resonance, and then making any additional adjustments (if necessary) with my tuner.

In other words, the purpose of my noise bridge is to tune the antenna WITHOUT using the transmitter. My noise bridge will be more like the MFJ-212 Matchmaker (http://www.mfjenterprises.com/products.php?prodid=MFJ-212), which does not have the resistance and reactance dials.

Jason Hsu, AG4DG
jason_hsu_802701@@@yahoo.com
http://www.jasonhsu.com/ham_radio-technical.html

2157. Re: NBFM audio demodulation at high IFs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 18:37:16 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C93919F.2FBB@pop.removethistomailme.net>
Source record: 45499
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Mike W wrote:
>
> How about useing a 21.4 xtal in place of the LC tank. ISTR seeing this
> used at 10.7 on the CA3089.

That's what I'm thinking. Was curious if there were any app notes out
there that talk about quadrature detection with crystals. I'll check
the CA3089's data sheet.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2158. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 18:59:11 UTC
From: Bob Nienhuis <nienhuis@wgn.net>
Message-ID: <3C9395FF.FABD9425@wgn.net>
Source record: 45500
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

I used to work on ILS systems in the Air Force. It's a little more
complicated
than that. The system used phased antenna arrays so that there was a set
of
space modulated lobes being radiated.

Bob
nienhuis@wgn.net

Jim Weir wrote:
>
> Take a frequency between 108 and 112 MHz.. Generate 10 watts of it. Split
> it into two parts. Modulate one of the parts with 90 Hz. and the other part
> with 150 Hz.. Send each of the parts to their own moderately directional
> antennas which are pointed (respectively) 10ï¿½ right and 10ï¿½ left of the
> runway centerline. If you are down the centerline, you receive equal parts
> of 90 and 150 Hz.. However, as you drift right or left, you move more into
> the center beam of one of the antennas, and the decoded signal has
> proportionally more 90 or 150, depending on HOW far you are off, and in
> which direction.
>
> Now, take another frequency between 325 and 340 MHz. and do the same thing,
> only this time orient the antennas so that the beams are pointed UP at about
> a 3ï¿½ angle instead of sideways. Now if you are too high you get too much of
> one tone, and low you get too much of the other.
>

2159. Re: NBFM audio demodulation at high IFs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 19:17:47 UTC
From: k7itm@aol.com
Message-ID: <3200347.0203161117.7a662bb7@posting.google.com>
Source record: 45501
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

And of course, a Q of 1000 is fairly low for a crystal. You might try
a crystal with damping. Consider that the series resonance is
normally pretty close to the parallel resonance, but if you use a
crystal whose series resonance is below the band of interest and load
it lightly enough with capacitance, you should be able to get the
parallel resonance where you want, and you can add series or shunt
resistance to adjust the Q.

You could also characterize one of your 21.4MHz filters as a one-port
to see if you get the phase response and impedance you need...if you
do, go for it. You might find that loading the "other" port with some
impedance helps. I don't know; I'm just guessing at things to try.

Cheers,
Tom

John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3C93076B.6C10@pop.removethistomailme.net>...
> Anyone got any tricks up their sleeves to allow NBFM (12 kHz channel
> spacing) demodulation directly at a 21.4 MHz IF, without the usual
> downconversion to 455 kHz?
>
> I'm looking to use the Philips SA604A FM IF subsystem chip, and I have a
> good assortment of 21.4 MHz monolithic crystal filters to play with. It
> would be nice if one of those filters could be pressed into service as
> the equivalent of a very-high-Q quadrature tank circuit. The required
> quadrature Q for NBFM recovery at 21.4 MHz is on the order of 1000, too
> high for the usual LC circuit.
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

2160. Re: Amplifier noise AND dynamic range

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 19:26:02 UTC
From: k7itm@aol.com
Message-ID: <3200347.0203161126.79750e07@posting.google.com>
Source record: 45502

Yes! Thanks for the reference, Jeroen! (I always like threads like
that which I learn something from.) The OP here doesn't need that
bandwidth, and in fact needs to get it down to maybe 100Hz to 10kHz,
but the basic ideas are very worthwhile.

Cheers,
Tom

Jeroen Belleman <Jeroen.Belleman@cern.ch> wrote in message
news:<3C91F64A.5C6986FD@cern.ch>...
> Tom Bruhns wrote:
> >
> > [...]
> > By the way, there was a discussion about a particularly low-noise
> > amplifier on sci.electronics.design a few months ago. I wish I could
> > provide a better pointer to it, but I'd have to go do a search to find
> > it.
>
> That would have been the thread I started. Go to Google - Groups and
> search for "Low noise amplifier design". The subject was a 100k-100MHz
> amplifier with 300pV/rtHz input-referred noise and a 50 Ohm input
> impedance.
>
> Jeroen Belleman

2161. FS: 100's of TUBES @ $.35 each

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 19:51:47 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <nnNk8.3521$J54.320710@news1.west.cox.net>
Source record: 45503
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Please email w6krc@arrl.net for a detailed list.

2162. FS: 100's of TUBES @ $.35 each

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 20:10:23 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <PENk8.3532$J54.323485@news1.west.cox.net>
Source record: 45504

Please email w6krc@arrl.net for a detailed list.

2163. FS: Celwave VHF BA1010-1 Omni Fiberglass Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 20:22:42 UTC
From: wickedlittlecritter@msn.com
Message-ID: <1404fdf3.0203161222.50849288@posting.google.com>
Source record: 45505
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.swap,rec.radio.amateur.homebrew,alt.ham-radio.vhf-uhf,alt.ham-radio.marketplace

This antenna was used for several years under moderate load (100-200 watts). This unit has been in storage since it was taken out of service and replaced with a directional unit in late 1998. Sold as is, not tested since it was removed from service in perfect working order. $50 OBO.

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1713202648

2164. Re: MM5314 Clock Chip data sheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 20:23:03 UTC
From: brassnads@charter.net
Message-ID: <u97ad7o068r6ab@corp.supernews.com>
Source record: 45506
Body handling: HTML body converted to readable text

I've built (2) precision clocks using that chip. I used an ovenized(5Mhz) oscillator for the timebase. They work great. Very accurate, over years.

In article <3C83FD67.19019CF7@ieee.org>, cshappee@ieee.org says...
>
>
>--------------2E914EAEDE263C8D8D8989DC
>Content-Type: text/plain; charset=us-ascii
>Content-Transfer-Encoding: 7bit
>
>Well, I have a 5314 that drives 7 segment, and have considered making a CPLD or PAL that goes
>backwards from 7 segment to BCD.... I likely wont use the chip in the new clock. Still desire
>the data sheet.
>
>But in 2 hours yesterday I did the entire BCD clock design for a CPLD..... It has features that
>I really like that I implemented years ago in a microprocessor system in that:
>
>
> you my change the hours without affecting the seconds,
> you can advance the time or make it go backwards easily during setting, hours
> independently of minutes.
>
>As for the nixie chat group, Hans, is this a yahoo chat or a usenet News group? If it is a
>usenet group, what is the proper name for the group?
>
>Hans, thanks for the links....
>
>Clyde
>KA1CRV
>
>Tom Bruhns wrote:
>
>> "Clyde R. Shappee" wrote in message news:<3C818E09.422DAEBE@ieee.org>...
>> ...
>> > I am working on a (sorry guys, please don't gag) a Nixie clock. After I posted

>> > the data sheet request, I realized this wasn't a BCD clock. I still
would like
>> > the data sheet for reference.
>>
>> Well, the data sheet covers four parts, some of which do have BCD
>> output. There are also some other MM53xx clock chips that have BCD
>> outputs. Guess you'll have to latch those and drive 7441's or equiv.
>> for your Nixies. -- Will you be wanting one of the BCD-output chips?
>>
>> Cheers,
>> Tom
>
>--------------2E914EAEDE263C8D8D8989DC
>Content-Type: text/html; charset=us-ascii
>Content-Transfer-Encoding: 7bit
>
>
>
>Well, I have a 5314 that drives 7 segment, and have considered making
>a CPLD or PAL that goes backwards from 7 segment to BCD.... I likely
>wont use the chip in the new clock. Still desire the data sheet.
>
But in 2 hours yesterday I did the entire BCD clock design for a
CPLD.....
>It has features that I really like that I implemented years ago in a
microprocessor
>system in that:
>

>
you my change the hours without affecting the seconds,
>
you can advance the time or make it go backwards easily during setting,
>hours independently of minutes.

>
>

As for the nixie chat group, Hans, is this a yahoo
>chat or a usenet News group? If it is a usenet group, what is the
>proper name for the group?
>
Hans, thanks for the links....
>
Clyde
>
KA1CRV
>
Tom Bruhns wrote:
>
"Clyde R. Shappee" <cshappee@ieee.org> wrote in

>message news:<3C818E09.422DAEBE@ieee.org>...
>
...
>
> I am working on a (sorry guys, please don't gag) a Nixie
clock.
>After I posted
>
> the data sheet request, I realized this wasn't a BCD clock.
>I still would like
>
> the data sheet for reference.
>
Well, the data sheet covers four parts, some of which do have BCD
>
output. There are also some other MM53xx clock chips that have
>BCD
>
outputs. Guess you'll have to latch those and drive 7441's or
>equiv.
>
for your Nixies. -- Will you be wanting one of the BCD-output
>chips?
>
Cheers,
>
Tom

>
>
>--------------2E914EAEDE263C8D8D8989DC--
>

2165. Re: FS: 100's of TUBES @ $.35 each

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 20:42:01 UTC
From: -Your Friend Bill- <none@coqui.net>
Message-ID: <3C93AE19.722D2267@coqui.net>
Source record: 45507

Murray Pasternack wrote:
>
> Please email w6krc@arrl.net for a detailed list.

This is the fifth time in the past 24 hours that this post has
appeared...on this group alone. Is this type of spamming necessary?

-Bill WX4A

2166. Re: Switchable amplifiers WITHOUT stray capacitance/inductance

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 20:50:29 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <tpa79ucgd1g9bu0p62ajc3pf37rvj2rllg@4ax.com>
Source record: 45508
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 16 Mar 2002 10:26:43 -0800, jason_hsu@my-deja.com (Jason Hsu)
wrote:

>NOTE: My version of the noise bridge will NOT have the variable
>resistor and capacitor that the original has. I will operate it by
>hooking it up, adjusting the antenna for minimum SWR for resonance,
>and then making any additional adjustments (if necessary) with my
>tuner.
>
>In other words, the purpose of my noise bridge is to tune the antenna
>WITHOUT using the transmitter. My noise bridge will be more like the
>MFJ-212 Matchmaker (http://www.mfjenterprises.com/products.php?prodid=MFJ-212),
>which does not have the resistance and reactance dials.
>
>Jason Hsu, AG4DG

Hi Jason,

You WILL NOT have R1-C1? It will not be a bridge then. These are (in
order) the reference and compensation for stray capacitance seen at
the "unknown" port; without them, you will never see a balance. Such
sweeping design changes will devastate the circuit, much less
eliminate any chance of accuracy (even for amateur work).

R1-C1 are not user controls in the first place, so you have missed the
intent of the previously suggested design. In other words, the two
designs you've offered are much more alike than dissimilar.

As a matter of practical design consideration, can you present us with
a schematic of the stripped down design of either bridge circuit? It
should reveal ONLY the principal components (black boxes for source
and detector are suitable here for simplicity's sake). Your
discussion through several threads suggests you are not familiar with
bridge topography and this ï¿½tude would be beneficial (and necessary).

73's
Richard Clark, KB7QHC

2167. crystal filters and overtones

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 20:58:05 UTC
From: g_and_s_pearce@xtra.co.nz
Message-ID: <3c93b160$1@zfree.co.nz>
Source record: 45509

Hi

Can you use crystals operating in their 3rd or 5th overtone modes in ladder filters? Is this a way to get narrow band high if crystal filters? I suspect not as I've not seenit done .. what is the thing preventing this

Thanks

Stephen zl1any

http://www.zfree.co.nz

2168. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 21:38:17 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u97epm70mc06d1@corp.supernews.com>
Source record: 45510
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

Work on them in the civilian world for a while and then come tell us about it. We don't do it that way in the real world.

Jim

"Bob Nienhuis" <nienhuis@wgn.net> wrote in message news:3C9395FF.FABD9425@wgn.net...
> I used to work on ILS systems in the Air Force. It's a little more
> complicated
> than that. The system used phased antenna arrays so that there was a set
> of
> space modulated lobes being radiated.
>
> Bob

2169. Need antenna for the Spectracom Netclock/2

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 22:14:14 UTC
From: brassnads@charter.net
Message-ID: <u97gtmthjofg05@corp.supernews.com>
Source record: 45511
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.broadcasting

Need antenna for the Spectracom Netclock/2 WWVB clock,
with preamp.

Thanks

2170. Meter Needed ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 22:56:59 UTC
From: Michael Melland <w9wis@charter.net>
Message-ID: <u97j8f562pgdfb@corp.supernews.com>
Source record: 45512

The meter in my otherwise mint Hickock 6000B stopped working correctly. I need either another original meter:

DC - Model 40, 100 micro amp, 1165 ohms

Or advise on where to look for a similar meter. About 4.5" by 3.5" or so....

Any help out there ?
--
Michael Melland, W9WIS
Winneconne, Wisconsin USA EN54pc
qrp-l #1656 - qrparci # 9875 - iparc #252
ars #1075 - http://www.qsl.net/w9wis

2171. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 23:07:15 UTC
From: berdpee@ami.com.au
Message-ID: <3c93cfc6.2556279@news.ami.com.au>
Source record: 45513
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

Hello Bob,

Sounds like a similar system to our AA No5 Mk7 radar about which I commented earlier on this thread.

On Sat, 16 Mar 2002 10:59:11 -0800, Bob Nienhuis <nienhuis@wgn.net> wrote:

>I used to work on ILS systems in the Air Force. It's a little more
>complicated
>than that. The system used phased antenna arrays so that there was a set
>of
>space modulated lobes being radiated.
>
>Bob
>nienhuis@wgn.net
>
>Jim Weir wrote:
>>
>> Take a frequency between 108 and 112 MHz.. Generate 10 watts of it. Split
>> it into two parts. Modulate one of the parts with 90 Hz. and the other part
>> with 150 Hz.. Send each of the parts to their own moderately directional
>> antennas which are pointed (respectively) 10° right and 10° left of the
>> runway centerline. If you are down the centerline, you receive equal parts
>> of 90 and 150 Hz.. However, as you drift right or left, you move more into
>> the center beam of one of the antennas, and the decoded signal has
>> proportionally more 90 or 150, depending on HOW far you are off, and in
>> which direction.
>>
>> Now, take another frequency between 325 and 340 MHz. and do the same thing,
>> only this time orient the antennas so that the beams are pointed UP at about
>> a 3° angle instead of sideways. Now if you are too high you get too much of
>> one tone, and low you get too much of the other.
>>

aeolus

2172. Re: Unusual AM Receiver Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-16 23:16:55 UTC
From: berdpee@ami.com.au
Message-ID: <3c93d05b.2705983@news.ami.com.au>
Source record: 45514
Cross-posted to: rec.aviation.homebuilt,sci.electronics.design,rec.radio.amateur.homebrew

Well Jim,

all I can say is 4 angle antenna lobe switching technology dates back
to "VALVE" days used in WW2. We had no trouble auto-tracking
hydrogen balloons in azimuth elevation and range. ERL at WRE in
Penfield South Australia even developed a CW radar system which could
give the pilot ground speed and drift as well as all the other
parameters he was ever likely to need and that was back in 1956.

On Sat, 16 Mar 2002 13:38:17 -0800, "Jim Weir" <jim@rst-engr.com>
wrote:

>Work on them in the civilian world for a while and then come tell us about
>it. We don't do it that way in the real world.
>
>Jim
>
>
>
>"Bob Nienhuis" <nienhuis@wgn.net> wrote in message
>news:3C9395FF.FABD9425@wgn.net...
>> I used to work on ILS systems in the Air Force. It's a little more
>> complicated
>> than that. The system used phased antenna arrays so that there was a set
>> of
>> space modulated lobes being radiated.
>>
>> Bob
>
>
>

aeolus

2173. If the MFJ-212 Matchmaker is not a noise bridge, then what is it?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 00:23:48 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0203161623.60757301@posting.google.com>
Source record: 45515
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

http://www.mfjenterprises.com/products.php?prodid=MFJ-212

Jason Hsu, AG4DG
jason_hsu_802701@@yahoo.com
http://www.jasonhsu.com/ham_radio-technical.html

2174. Re: NBFM audio demodulation at high IFs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 00:27:08 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <wpRk8.13584$tP2.1162929@bgtnsc05-news.ops.worldnet.att.net>
Source record: 45516
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

I think that I missed the mark on this one; sorry folks! I did check my
Murata databook, and the only ceramic discriminators that they have are for
10.7MHz.

Pete KE9OA

Bruhns <k7itm@aol.com> wrote in message
news:3200347.0203161117.7a662bb7@posting.google.com...
> And of course, a Q of 1000 is fairly low for a crystal. You might try
> a crystal with damping. Consider that the series resonance is
> normally pretty close to the parallel resonance, but if you use a
> crystal whose series resonance is below the band of interest and load
> it lightly enough with capacitance, you should be able to get the
> parallel resonance where you want, and you can add series or shunt
> resistance to adjust the Q.
>
> You could also characterize one of your 21.4MHz filters as a one-port
> to see if you get the phase response and impedance you need...if you
> do, go for it. You might find that loading the "other" port with some
> impedance helps. I don't know; I'm just guessing at things to try.
>
> Cheers,
> Tom
>
> John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3C93076B.6C10@pop.removethistomailme.net>...
> > Anyone got any tricks up their sleeves to allow NBFM (12 kHz channel
> > spacing) demodulation directly at a 21.4 MHz IF, without the usual
> > downconversion to 455 kHz?
> >
> > I'm looking to use the Philips SA604A FM IF subsystem chip, and I have a
> > good assortment of 21.4 MHz monolithic crystal filters to play with. It
> > would be nice if one of those filters could be pressed into service as
> > the equivalent of a very-high-Q quadrature tank circuit. The required
> > quadrature Q for NBFM recovery at 21.4 MHz is on the order of 1000, too
> > high for the usual LC circuit.
> >
> > -- jm
> >
> > --
> > http://www.qsl.net/ke5fx
> > Note: My E-mail address has been altered to avoid spam
> > --

2175. Re: If the MFJ-212 Matchmaker is not a noise bridge, then what is it?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 00:28:08 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <jno79u46to0fhhke01448k08skmsuq50ua@4ax.com>
Source record: 45517
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 16 Mar 2002 16:23:48 -0800, jason_hsu@my-deja.com (Jason Hsu)
wrote:

>http://www.mfjenterprises.com/products.php?prodid=MFJ-212
>
>Jason Hsu, AG4DG

Why do you presume it is not?

73's
Richard Clark, KB7QHC

2176. FS: Variacs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 01:41:26 UTC
From: Walter Treftz <penguino@atlantic.net>
Message-ID: <3C93F446.52E8F63D@atlantic.net>
Source record: 45520

VARIACS FOR SALE (variac.ad)(3/16/02)

The following variacs are offered for sale from
various estates that our committee ("widow's committee)
of the local club are handling. Accepting reasonable
offers. Digital pix are avail on request. All items
are "plus postage/shipping" but, if we can find a
suitable box/packing material, there is no extra charge
for packing and taking to USPO/UPS. Otherwise, buyer
pays any actual packing charges by the UPS "agency"
Shipping is from north-central Florida (ZIP: 34442).

General Radio Model M2-S25 110V input coil size
1-1/4" x 3-1/4"d, double slider.

General Radio 110v, case size 4.5" x 4.5"d, with knob
& 0-135v dial plate & large knob.

Standard Electric Products Co., Model 6541, 0-135vac
7.5a (1 kw max), coil side: 3" x 4"d

General Radio, 0-135vac, case size: 2.5" x 3"d, with
0-135v dial plate and large knob.

Contact: Walter Treftz (N4GL) -- perguino@atlantic.net
(352) 637-1755

2177. Re: Swiching RF with CMOS/mixers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 01:52:46 UTC
From: Rodney Green <rodagreen@bigpond.com>
Message-ID: <CGSk8.13143$uR5.28529@newsfeeds.bigpond.com>
Source record: 45518

"Richard Hosking" <zaprichardh@iinet.net.au(remove the zap)> wrote in
message news:3c8bf41f$1$14978@echo-01.iinet.net.au...
> Has anyone tried using the new TinyLogic switches in a mixer? eg the
> Fairchild
> NC7SB3157 SPDT switch?
> I am thinking this could be used in a balanced mixer - due to the double
> throw action it would be inherently balanced
> Could two of these look like a diode ring mixer?
>
> Richard
>
>
I haveused a single one of these in a commercial transceiver design as the
first mixer to 45 MHz. These can be trimmed with bias for best IP3. rom
memory IP3 is in the low 30 dB range. Havent tried two as a quad bridge
(like diode DBM style)

2178. Re: Amplifier noise AND dynamic range

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 02:12:22 UTC
From: Rodney Green <rodagreen@bigpond.com>
Message-ID: <_YSk8.13150$uR5.28868@newsfeeds.bigpond.com>
Source record: 45519

"Tom Bruhns" <k7itm@aol.com> wrote in message
news:3200347.0203141249.4dda23b6@posting.google.com...
> Well, yes, I think it can be done. For high dynamic range, you want
> low distortion and a reasonably high power supply voltage...though in
> fact, I guess it's doubtful you'd need a clipping level that's
> terribly high since your mixers will be limited by their compression
> point if not their distortion below that. You might consider a
> bootstrapped cascode input stage...you didn't mention what
> configuration you're using right now. With appropriate feedback, the
> bootstrapped cascode can be quite linear...distortion products similar
> to what you'll see with an AD797 or OPA627. You could include an
> AD797 if you want, though you can also just do the whole preamp stage
> discrete. (You may find some interesting ideas if you do a search for
> "moving coil preamp" as related to phono preamps. They deal with
> trying to get low noise with a low-impedance source, and a wide
> dynamic range--especially before the equalization.)
>
> So...what configuration do you have now, and what are its
> shortcomings?
>
> By the way, there was a discussion about a particularly low-noise
> amplifier on sci.electronics.design a few months ago. I wish I could
> provide a better pointer to it, but I'd have to go do a search to find
> it.
>
> Cheers,
> Tom
>
> "Rodney Green" <rodagreen@bigpond.com> wrote in message
news:<yv2k8.11616$uR5.23035@newsfeeds.bigpond.com>...
> > Ihave two Analog devices AD797 low noise, low distortion amplifiers I am
> > going to use as post mixer amps in a quadrature receiver for SSB.
Looking at
> > the spec for noise, it is somewhere between 0.9 and 1.2 nV/sqrt Hz. My
noise
> > measuring equipment verified this. However, this amplifier is still not
> > quiet enough, as I have built a circuit which IS, using a parallel pair
of
> > 2n 3904 transistors which give a NF of about 2dB. Is there any way of
> > stitching together a desceete amplifier and the AD797 to have a
combination
> > low noise amp with high dynamic range? i suspect not somehow!
> > Thanks from Rod VK6KRG

Currently I am testing (not yet using) a pait of 2N3904 small signal transistors in parallel, (separately bypassed emitters) as a single common emitter stage. The IP3 is +35 dBm (measured with 50 ohm meter bridging 10K). This figure is OK. The problem is that the gain is MUCH too high. I only need 10 to 15 dB. The signal is then being remixed to455kHz in two paths and combined in a single IF amp. This is a new TYPE of receiver which on which I have a patent pending. It is to be published by the ARRL in QEX soon. It is also being considered for commercial use IF I can overcome the noise problem. 73 from Rod VK6KRG

2179. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 02:58:41 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <5o089ukbhale9ehtps1leg92io4fqd7e9l@4ax.com>
Source record: 45521

On Fri, 15 Mar 2002 02:40:51 GMT, gaschafer@attbi.com (Gary Schafer) wrote:
>It is not misinformation. A bnc connector does not have a flat
>impedance response through 1ghz. Yes they are fine for a lot of
>applications including 1ghz operation. Even a pl259 will work at
>1ghz.
>But if you are concerned with flat response over the entire range as I
>pointed out a type N connector is supperior.

Why would that be? Type BNC and Type N connectors of the same
impedance have exactly the same center conductor contact structure,
exactly the same shield conductor contact structure, and if specified that
way, exactly the same dielectric structure.

The only real difference is the way the connectors are locked together
by their external rings, one using the bayonet cam, the other using a
threaded ring. Neither locking mechanism has any effect on the electrical
properties of the connectors. Contact force is provided by the spring
fingers of the respective contacts in both cases, and they are identical.

The *only* thing that a Type N has going for it over a Type BNC is
mechanical ruggedness, and possibly a bit better weather sealing.

Gary

2180. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 03:17:39 UTC
From: Rex <notreally@hotmail.invalid>
Message-ID: <ri289u07tb0cl3u822o8va8o2ee8uluggq@4ax.com>
Source record: 45522

On Sat, 16 Mar 2002 21:58:41 -0500, Gary Coffman
<ke4zv@bellsouth.net> wrote:

>Type BNC and Type N connectors of the same
>impedance have exactly the same center conductor contact structure,
>exactly the same shield conductor contact structure, and if specified that
>way, exactly the same dielectric structure.
>
>The only real difference is the way the connectors are locked together
>by their external rings, one using the bayonet cam, the other using a
>threaded ring. Neither locking mechanism has any effect on the electrical
>properties of the connectors. Contact force is provided by the spring
>fingers of the respective contacts in both cases, and they are identical.
>
>The *only* thing that a Type N has going for it over a Type BNC is
>mechanical ruggedness, and possibly a bit better weather sealing.
>
>Gary

Agreed. As mentioned before, there might be slightly lower
radiation too on the N.

Where have you been, Gary? Haven't seen any posts in a long while.

-Rex
[rexa -TheAtSign- Next4dnaiLetters -period- (UsualComEnd)]< my_eemale_addy

2181. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 03:24:11 UTC
From: Gary Glaenzer <nobulltrans@mchsi.com>
Message-ID: <v%Tk8.54362$ZR2.28603@rwcrnsc52.ops.asp.att.net>
Source record: 45523

"Gary Coffman" <ke4zv@bellsouth.net> wrote in message
news:5o089ukbhale9ehtps1leg92io4fqd7e9l@4ax.com...
> On Fri, 15 Mar 2002 02:40:51 GMT, gaschafer@attbi.com (Gary Schafer)
wrote:
> >It is not misinformation. A bnc connector does not have a flat
> >impedance response through 1ghz. Yes they are fine for a lot of
> >applications including 1ghz operation. Even a pl259 will work at
> >1ghz.
> >But if you are concerned with flat response over the entire range as I
> >pointed out a type N connector is supperior.
>
> Why would that be? Type BNC and Type N connectors of the same
> impedance have exactly the same center conductor contact structure,
> exactly the same shield conductor contact structure, and if specified that
> way, exactly the same dielectric structure.
>
> The only real difference is the way the connectors are locked together
> by their external rings, one using the bayonet cam, the other using a
> threaded ring. Neither locking mechanism has any effect on the electrical
> properties of the connectors. Contact force is provided by the spring
> fingers of the respective contacts in both cases, and they are identical.
>
> The *only* thing that a Type N has going for it over a Type BNC is
> mechanical ruggedness, and possibly a bit better weather sealing.
>

I've heard it said that 'BNC' stands for 'Baby N
Connector'.....anyone else ever heard that?

I do know that you can plug an N plug onto a BNC jack without damage

G

2182. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 03:58:06 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C941528.5E8C@pop.removethistomailme.net>
Source record: 45524

```
Gary Glaenzer wrote:
>
> I've heard it said that 'BNC' stands for 'Baby N
> Connector'.................anyone else ever heard that?
>

Bayonet Neill-Concelman (sp?).

-- jm

------------------------------------------------------
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
------------------------------------------------------
```

2183. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 04:04:23 UTC
From: Gary Glaenzer <nobulltrans@mchsi.com>
Message-ID: <bBUk8.53681$Yv2.23379@rwcrnsc54>
Source record: 45525

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message
news:3C941528.5E8C@pop.removethistomailme.net...
> Gary Glaenzer wrote:
> >
> > I've heard it said that 'BNC' stands for 'Baby N
> > Connector'.................anyone else ever heard that?
> >
>
> Bayonet Neill-Concelman (sp?).
>

never heard that one

2184. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 04:21:36 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3C9419CF.4DAC0EB8@ieee.org>
Source record: 45526

Gary Glaenzer wrote:

> "John Miles" <jmiles@pop.removethistomailme.net> wrote in message
> news:3C941528.5E8C@pop.removethistomailme.net...
> > Gary Glaenzer wrote:
> > >
> > > I've heard it said that 'BNC' stands for 'Baby N
> > > Connector'.....anyone else ever heard that?
> > >
> >
> > Bayonet Neill-Concelman (sp?).
> >
>
> never heard that one

Neill and Concelman (sp) both worked at Bell Labs. and designed
connectors.

Bill K7NOM

2185. Re: NBFM audio demodulation at high IFs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 05:44:49 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0203162144.1c8ec3f2@posting.google.com>
Source record: 45527
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3C93076B.6C10@pop.removethistomailme.net>...
> Anyone got any tricks up their sleeves to allow NBFM (12 kHz channel
> spacing) demodulation directly at a 21.4 MHz IF, without the usual
> downconversion to 455 kHz?
>
> I'm looking to use the Philips SA604A FM IF subsystem chip, and I have a
> good assortment of 21.4 MHz monolithic crystal filters to play with. It
> would be nice if one of those filters could be pressed into service as
> the equivalent of a very-high-Q quadrature tank circuit. The required
> quadrature Q for NBFM recovery at 21.4 MHz is on the order of 1000, too
> high for the usual LC circuit.
>
I was sure I'd seen a filter used instead of an LC circuit in a quadrature
detector. Somewhere (I really wish I knew where) I have a box with some
interesting circuit boards, including something I bought at a hamfest
that used what seemed to be a filter. I know it was a three-terminal
metal can, and I kept the board intact because I was curious about it.
I was sure I'd seen a diagram or two along these lines, but though I
kept trying to think of where, I came up blank.

Then I thought of checking Rohde's receiver book. He shows a circuit
from KVG that uses a "dual-crystal resonator" as the tuned circuit
in a CA3089 design. It does show simple LC circuits, presumably for
matching, at both the input and output of the filter.

From the text: "Also, the improved stability desirable from a high-quality
communications receiver can be achieved with the use of quartz crystal
resonators in the discriminator circuit. Either amplitude or phase
discrimination can be made using crystal resonators if the frequency and
the Q of the crystals are compatible. The phase comparison detector is
most easily adapted to such an application. A particulary convenient
arrangement is to use a monolithic crystal with two poles. Spacing
between the two resonators on the substrate determines the coupling.
The voltage across the two resonators differs in phase by 90 degrees at
the center frequency, as required for the phase coincidence detector.
Because of the high Q of crystal resonators, the bandwidth of such
discriminators is comparatively narrow."

I'm sure I've seen a crystal used with a CA3089, but I can't say
where. An RCA data sheet that I could put my hands on did not have this.
I suspect what I'm remembering was a later edition.

The passage from the Rohde book reminds me that someone, the name Shubert comes to mind, wrote an article in Ham Radio about 1974 or 75 (definitely before going to the large format), about making a crystal discriminator. Used a crystal and a tuned circuit. It was probably a November receiver issue.

Michael VE2BVW

2186. Re: You have got to build it to believe it!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 06:13:57 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0203162213.5997f5d5@posting.google.com>
Source record: 45528

" Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message
news:<_tIk8.3793$PL1.157144@news2.east.cox.net>...
> There is a big difference between a regenerative receiver and a
> superregenerative.
>
> Pete
>
Well we were talking super-regen.

But while the results of the two types of detectors can be quite
different, there is practically no difference in the circuitry.

Because this came up a few weeks back, I went back to read up on
the superregenerative. According to the history books, Armstrong
came across the phenomena when he first came across regeneration,
and somehow he didn't follow it up. Almost a decade later, when
he was doing some work on the regen to prepare for his court battle
over the patent, he came across superregeneration. He didn't try
to soup up the regen, the regen circuit accidentally started
quenching. He fiddled around, figured things out, and the patent was
issued 80 years ago.

A regen detector is ultimately just an oscillator, with something to
control the feedback. Or to go a step simpler, a regen detector is
an amplifier with controllable positive feedback. A superregen is just a
regen with something to modulate it at ultrasonic frequencies.

This is crucial to the discussion, because while a lot of people have
built superregens over the years, because they were simple, I suspect
few have much of an understanding of them. To say there is a big
difference is to inhibit an understanding. If people don't see
the progression from amplifier to regen to superregen, they'll see
the superregen as some sort of black box; they probably know about
quenching but that's it.

Once Armstrong figured out what was going on, he added a separate stage
to do the quenching. In those terms, it's much easier to visualize
what's happening. But it would appear that once the patent was issued,
everyone went to the simplest scenario, self-quenching. It made a lot
of sense in the thirties when components were expensive, and money
was hard to come by, and selectivity wasn't really important. But along
the way people have lost track of that patent, and so you never see
an externally quenched superregen (though once in a while, a passing
mention is made). So for decades, everyone would grumble about
the lack of selectivity of a superregen, and if someone tried to
improve the selectivity it was all focused on the tuned circuit.

But if you modulated an oscillator with a some sort of ramp or
pulse waveform, would you really expect to get a narrow band output?

Self-quenching gives little control over the waveform, or it's amplitude,
or it's frequency. A separate quenching oscillator gives you this,
and when it is external, it becomes a lot more obvious that the basic
circuit is a regen.

That's the whole point of Charles Kitchin's work on superregenerative
receivers. He's gone back, and tried to improve it by dealing with
the quenching. I think all of his circuits are still self-quenching,
but he has made attempts at modifying the quenching waveform, and
he says it helps.

I never saw his Communications Quarterly article on superregeneration,
but I did see some of the follow up letters, where people thought it
was a waste of space. In some ways, it is pretty useless to try to
improve something like the rush box. But at the same time, the process
that he must have used, going back to the beginning rather than trying
to add an extension on decades of ultra-simple circuits, understanding
what is going on and then trying to improve it, is a vitally important
process.

So when some guy talks about finding a "circuit on the ARRL website,
but it had too many parts, so I started taking parts out", he is ignoring
the fact that those extra parts may add to the circuit, and unknowingly,
he is reinforcing the image of the superregen that has existed for
most of the past 80 years.

Michael VE2BVW

> "Alan Yates" <alany@ay.com.au> wrote in message
> news:3C92BB90.8FD145F6@ay.com.au...
> > Laura Halliday wrote:
> >
> > > This is his 4th posting.
> >
> > Indeed it is, he got flamed each other time, just like this.
> >
> > Give the poor chap a break, he has a nice beginners or weekend
> > relaxation project there. We aren't all EE grads, HAMs and interested
> > geeks come in all levels of ability, sometimes even the more skilled
> > like to slap together a minial circuit for fun, or to give to the kids
> > to play with.
> >
> > Clearly the circuit borrows a lot from the work of many over the years,
> > and he credits Charles Kitchin at least, many don't.
> >
> > > The capabilities (sensitivity) and limitations (dismal
> > > selectivity, oscillator radiation, AM/WBFM only) of
> > > super-regenerative receivers are well known...
> >
> > You really should read some of Mr Kitchin's work if you believe that is

> > always true.
> >
> > --
> > Alan Yates
> > http://www.vk2zay.net/

2187. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 07:36:26 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3C94477A.DDA9653E@eznec.com>
Source record: 45529

And in fact the N connector is named for Neill, who designed it. The two collaborated on the BNC. I'm sure it would take only moments to locate via a web search as much information about this as anyone would want.

Roy Lewallen, W7EL

Bill Janssen wrote:
>
> Neill and Concelman (sp) both worked at Bell Labs. and designed
> connectors.
>
> Bill K7NOM

2188. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 09:54:31 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <jkp89u4tqe0fgp560ljjvhu3ibjnkapaln@4ax.com>
Source record: 45530

On Sat, 16 Mar 2002 20:21:36 -0800, Bill Janssen <billj@ieee.org> wrote:
>Gary Glaenzer wrote:
>> "John Miles" <jmiles@pop.removethistomailme.net> wrote in message
>> news:3C941528.5E8C@pop.removethistomailme.net...
>> > Gary Glaenzer wrote:
>> > >
>> > > I've heard it said that 'BNC' stands for 'Baby N
>> > > Connector'.....anyone else ever heard that?
>> >
>> > Bayonet Neill-Concelman (sp?).
>>
>> never heard that one
>
>Neill and Concelman (sp) both worked at Bell Labs. and designed
>connectors.

Right. There's an old wheeze going around that the N connector
was the "Navy" connector, but that's not true. Neil designed the
N connector, Concelman (sp) designed the C connector, and both
collaborated on the BNC and TNC connectors. The history is in
old Bell System Journal articles. I've got them somewhere, stored
in a box in the attic.

Gary

2189. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 10:21:08 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.com>
Message-ID: <JXE0syAU4GI8EAwm@ifwtech.com>
Source record: 45531

Gary Coffman wrote:
>On Fri, 15 Mar 2002 02:40:51 GMT, gaschafer@attbi.com (Gary Schafer) wrote:
>>It is not misinformation. A bnc connector does not have a flat
>>impedance response through 1ghz. Yes they are fine for a lot of
>>applications including 1ghz operation. Even a pl259 will work at
>>1ghz.
>>But if you are concerned with flat response over the entire range as I
>>pointed out a type N connector is supperior.
>
>Why would that be? Type BNC and Type N connectors of the same
>impedance have exactly the same center conductor contact structure,
>exactly the same shield conductor contact structure, and if specified that
>way, exactly the same dielectric structure.
>
>The only real difference is the way the connectors are locked together
>by their external rings, one using the bayonet cam, the other using a
>threaded ring. Neither locking mechanism has any effect on the electrical
>properties of the connectors. Contact force is provided by the spring
>fingers of the respective contacts in both cases, and they are identical.
>

The contact geometries are identical, but the contact forces on the
outer-conductor connection are not.

The mating surfaces are very slightly tapered, so the radial contact
force is generated by the pulling-together force between the two shells.
On the N connector or the TNC, you can screw the ring down until the
rubber washer inside the plug is fully compressed. On the BNC (or the C,
which is an N-size bayonet connector) the washer is *never* completely
compressed in the locked position - or else you couldn't make it click
into place - so the contact force is less. This opens up the
possibilities of reduced performance.

The practical difference is that you can always rotate a BNC or a C
plug when it's mated - and as the rubber washer ages under compression,
the contact force on the outer conductor can become very unreliable. You
can't rotate an N or a TNC - even with an old washer, you simply screw
down the ring a little further and the contact force is just like new.

All this is complicated by the amateur's habit of recycling old
connectors (some of my BNCs must have clocked up 30-40 years with myself
and the previous owners, and many of them have been reassembled several
times) and of course we never use a cutting jig to assemble them
correctly. Therefore we get a lot more variation in performance than the
professionals who use new, factory-assembled leads. But as others have

said, that generally doesn't matter, except when we try to make precision SWR/return-loss measurements, measure very low levels of spurious signals, or use very high power.

Going all the way back to the original question, the old 141-series H-P spectrum analysers have BNC sockets on all the RF plugins, up to 1.3GHz. The only practical problems arise from using old or incorrectly-assembled plugs (or 75-ohm plugs)... and all that, you can do something about.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.com/g3sek

2190. Re: TS440

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 10:52:56 UTC
From: Douglas Kilgore <dougkilgore@attbi.com>
Message-ID: <3C94758D.91B0A2FD@attbi.com>
Source record: 45532

I built a PSK31 audio interface using an MFJ-5213 prewired 13 pin DIN male plug. It sure beats trying to colder to the pins on the back of the plug.

http://www.mfjenterprises.com/products.php?prodid=MFJ-5213

Doug KD5OUG

Nobody wrote:
>
> Looking for part numbers for male plugs to fit accessory sockets on a
> Kenwood TS440 Also would like to contact anyone who has trunk mounted a
> TS440 (or similar)
>
> Thanks
>
> Ted Kester KD4EE
> tk1932@speedfactory.net

2191. Need 8051 Help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 12:51:03 UTC
From: Steve <steve34613@atlantic.net>
Message-ID: <3C949137.634E@atlantic.net>
Source record: 45533

Hi,

I'm looking for a 64 page instruction booklet for the 8051 microcontroller. Its titled "Assembly Language Basics"

It was published by a company called Suncoast Technologies of Spring Hill FL 34606.

The booklet was sold around 1995-96 for $15.00.

If you have this book, please email me at: steve34613@atlantic.net

I would like to purchase a copy. Please email me if you have this booklet; as I am unable to log into these NGs everyday to check for responses.

Thank You
Steve

2192. Re: power supply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 15:13:44 UTC
From: Rich Griffiths <richg@one.net>
Message-ID: <3C94B2A8.633C6382@one.net>
Source record: 45534

You'll need some specs first, Joel. What voltage? How much current?
Maximum cost?

Then you need to decide whether you'll be buying new parts or
scrounging, what features you want (like metering, overvoltage
protection, current limiting, etc.), how much ripple you'll allow, and
whether you want the output electronically regulated (though I can't see
why someone would build an unregulated supply nowadays).

You really should start by getting a book that has a decent section on
power supplies and reading that. Doing a little homework will help you
decide what specs you want, and you should then be better prepared to
ask specific questions. I think you'll find plenty of helpful folks on
this newsgroup.

... Rich

Joel Pelz wrote:
>
> Hello
>
> First off, let me state that I am new to amature radio and and an new to
> this news group. I was woundering if someone out there could help me build
> a power supply.
>
> Joel Pelz
> kc9atj
> joelp@kconline.com

2193. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 15:37:32 UTC
From: gaschafer@attbi.com
Message-ID: <3c94b71e.2898761@netnews.attbi.com>
Source record: 45535

On Sun, 17 Mar 2002 10:21:08 +0000, "Ian White, G3SEK"
<G3SEK@ifwtech.com> wrote:

>Gary Coffman wrote:
>>On Fri, 15 Mar 2002 02:40:51 GMT, gaschafer@attbi.com (Gary Schafer) wrote:
>>>It is not misinformation. A bnc connector does not have a flat
>>>impedance response through 1ghz. Yes they are fine for a lot of
>>>applications including 1ghz operation. Even a pl259 will work at
>>>1ghz.
>>>But if you are concerned with flat response over the entire range as I
>>>pointed out a type N connector is supperior.
>>
>>Why would that be? Type BNC and Type N connectors of the same
>>impedance have exactly the same center conductor contact structure,
>>exactly the same shield conductor contact structure, and if specified that
>>way, exactly the same dielectric structure.
>>
>>The only real difference is the way the connectors are locked together
>>by their external rings, one using the bayonet cam, the other using a
>>threaded ring. Neither locking mechanism has any effect on the electrical
>>properties of the connectors. Contact force is provided by the spring
>>fingers of the respective contacts in both cases, and they are identical.
>>
>
>The contact geometries are identical, but the contact forces on the
>outer-conductor connection are not.
>
>The mating surfaces are very slightly tapered, so the radial contact
>force is generated by the pulling-together force between the two shells.
>On the N connector or the TNC, you can screw the ring down until the
>rubber washer inside the plug is fully compressed. On the BNC (or the C,
>which is an N-size bayonet connector) the washer is *never* completely
>compressed in the locked position - or else you couldn't make it click
>into place - so the contact force is less. This opens up the
>possibilities of reduced performance.
>
>The practical difference is that you can always rotate a BNC or a C
>plug when it's mated - and as the rubber washer ages under compression,
>the contact force on the outer conductor can become very unreliable. You
>can't rotate an N or a TNC - even with an old washer, you simply screw
>down the ring a little further and the contact force is just like new.
>
>All this is complicated by the amateur's habit of recycling old
>connectors (some of my BNCs must have clocked up 30-40 years with myself

>and the previous owners, and many of them have been reassembled several
>times) and of course we never use a cutting jig to assemble them
>correctly. Therefore we get a lot more variation in performance than the
>professionals who use new, factory-assembled leads. But as others have
>said, that generally doesn't matter, except when we try to make
>precision SWR/return-loss measurements, measure very low levels of
>spurious signals, or use very high power.
>
>
>Going all the way back to the original question, the old 141-series H-P
>spectrum analysers have BNC sockets on all the RF plugins, up to 1.3GHz.
>The only practical problems arise from using old or
>incorrectly-assembled plugs (or 75-ohm plugs)... and all that, you can
>do something about.
>
>--
>73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
> 'In Practice' columnist for RadCom (RSGB)
> http://www.ifwtech.com/g3sek

Plugging a type N into a BNC does work but it is not a good idea. (I
can hear more flames
coming) If you look closely the type N center pin is slightly larger
than the BNC pin. It will
distort the center contact on the BNC female. Then when you go and put
a BNC back in it will
sometime not make good contact again.

I have an old HP 141 also and yes it does have BNC connectors on the
rf. There were several
manufacturers that used them in the past. With more recent equipment
where there is more
concentration of work being done in the higher frequencies I think
that the realization is a little
clearer of the shortcomings of the BNC.
Motorola manufacturers a service monitor that goes to 1ghz. The common
cable used by the
radio people using the unit is bnc. I asked the Motorola engineers why
they did not supply the
unit with a BNC connector as they do ship an N to BNC adapter with the
unit. The answer was
that it was impossible to reach the flatness response spec above about
700 mhz.

73
Gary K4FMX

2194. Re: Switchable amplifiers WITHOUT stray capacitance/inductance

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 16:00:34 UTC
From: Rory Davis <n7cr@nospambellsouth.net>
Message-ID: <j43l8.88655$Nn6.4961191@e3500-atl2.usenetserver.com>
Source record: 45536
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"Jason Hsu" <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0203161026.2f648b2c@posting.google.com...
> NOTE: My version of the noise bridge will NOT have the variable
> resistor and capacitor that the original has. I will operate it by
> hooking it up, adjusting the antenna for minimum SWR for resonance,
> and then making any additional adjustments (if necessary) with my
> tuner.
>
> In other words, the purpose of my noise bridge is to tune the antenna
> WITHOUT using the transmitter. My noise bridge will be more like the
> MFJ-212 Matchmaker
(http://www.mfjenterprises.com/products.php?prodid=MFJ-212),
> which does not have the resistance and reactance dials.

Sounds like you're trying to build a return-loss bridge. Works good with a spec-an with a TG. Zach Lau did a couple of articles for QEX a couple of years ago describing the use and construction.

73/N7CR

2195. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 16:20:08 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.com>
Message-ID: <XdvTeIC4IMl8EAS8@ifwtech.com>
Source record: 45539

Gary Schafer wrote:
>Plugging a type N into a BNC does work but it is not a good idea. (I
>can hear more flames coming) If you look closely the type N center pin
>is slightly larger than the BNC pin. It will distort the center contact
>on the BNC female. Then when you go and put
>a BNC back in it will
>sometime not make good contact again.
>
Yes, sorry - you're right, they are similar enough to be almost
compatible, but not identical. Putting an N plug into a BNC socket is
not a good idea anyway, because there is nothing to hold the two
connectors together.

>I have an old HP 141 also and yes it does have BNC connectors on the
>rf. There were several manufacturers that used them in the past. With
>more recent equipment where there is more concentration of work being
>done in the higher frequencies I think
>that the realization is a little
>clearer of the shortcomings of the BNC.
>Motorola manufacturers a service monitor that goes to 1ghz. The common
>cable used by the radio people using the unit is bnc. I asked the
>Motorola engineers why they did not supply the unit with a BNC
>connector as they do ship an N to BNC adapter with the unit. The answer
>was that it was impossible to reach the flatness response spec above
>about 700 mhz.

Like other contributors, I find that statement surprising. For a
non-precision instrument operating only up to 1GHz, BNCs in good
condition should be plenty good enough. On the other hand, it might seem
more reasonable if they had qualified the statement in some way, for
example by saying that it was impossible to do it reliably, in the long
term, and/or with worn-out BNC plugs.

So they use an N connector on the instrument, and then supply an N to
BNC adapter... yeah, right...

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.com/g3sek

2196. Re: Need antenna for the Spectracom Netclock/2

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 16:23:16 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <u99gnkirjtagaa@corp.supernews.com>
Source record: 45537
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.broadcasting

howdy wrote:

> Need antenna for the Spectracom Netclock/2 WWVB clock,
> with preamp.
>
> Thanks

Have you checked with Spectracom ? They were very good to work with
11 years ago.

Bill K7NOM

2197. Cauer Elliptic Bandpass Filter Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 16:24:16 UTC
From: maxfro@aol.com
Message-ID: <20020317112416.14719.00002591@mb-ba.aol.com>
Source record: 45538

Hi Gang,

Check out my new web page that let's you design Cauer elliptic bandpass filters right from your web browser, nothing to download and absolutely free.

http://members.aol.com/maxfro/

Happy St. Pat's Day!
Cheers!
Max

2198. Re: CW question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 16:35:19 UTC
From: darlyput13@hotmail.com
Message-ID: <a72gg3$52h$1@news7.svr.pol.co.uk>
Source record: 45540

It's not massive but there are a few folks there.

alt.ham-radio.morse

2199. Re: power supply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 17:24:59 UTC
From: Ronald Palma <ert76jnjn@hetnet.nl>
Message-ID: <egpzGgdzBHA.296@net037s.hetnet.nl>
Source record: 45541

take al look at this site:
http://www.mitedu.freeserve.co.uk/Circuits/Power/l200.html
here you will find a nice powersupply.
The 4 arrows on the left site are diodes. You can buy 4 diodes sepperatly
or one block. On this block you must glue a heatsink with special glue.
The bigger the heatsink is the better it will cool the block. The inventor
of
this system is Greatz. He invented a way to invert the sinus-current into an
pulsing directcurrent. There must be websites about him.

The electrolytic capacitators (4700uf and 10uf) are only working well if you
place the positive and the negative pins right.= polarity-sensitive
If you don't then you blow the electrolytic capacitators up.
It is easy to see what the negative pin is. It is marked with -
The other capacitators (100n and 100n) are not polarity-sensitive.
The resistor are also not polarity-sensitive.

If you made this powersupply you can ask someone to measure how flat
the outputcurrentcy will be. This you can do with a oscilloscoop.

have fun.

"Joel Pelz" <joelp@kconline.com> schreef in bericht
news:a6ua72$1i6m$1@nix2.kconline.com...
> Hello
>
> First off, let me state that I am new to amature radio and and an new to
> this news group. I was woundering if someone out there could help me
build
> a power supply.
>
> Joel Pelz
> kc9atj
> joelp@kconline.com
>
>

2200. improving FT-101EE AM receive?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 17:25:32 UTC
From: AB Brown <abbrown@nospammail.com>
Message-ID: <a72jh1$dn9$1@slb7.atl.mindspring.net>
Source record: 45542
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I recently purchased a nice, used FT-101EE. The radio appears to be working except the AM receive is distorted. I recently read that there is a way to add a separate 6 Khz AM IF filter that will cure the problem but upon checking the prices of the Fox-Tango filters, I'd like to find an alternative (I paid less for the radio than the price they are asking).

Appreciate any thoughts here and thanks, in advance.

AB

2201. Re: improving FT-101EE AM receive?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 17:41:21 UTC
From: PAC <choops@erinet.com>
Message-ID: <5z4l8.163795$Hu6.37498611@typhoon.neo.rr.com>
Source record: 45543
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Keep an eye on Ebay for AM filters. I see them from time to time there.

"AB Brown" <abbrown@nospammail.com> wrote in message
news:a72jh1$dn9$1@slb7.atl.mindspring.net...
> I recently purchased a nice, used FT-101EE. The radio appears to be
working
> except the AM receive is distorted. I recently read that there is a way
to
> add a separate 6 Khz AM IF filter that will cure the problem but upon
> checking the prices of the Fox-Tango filters, I'd like to find an
> alternative (I paid less for the radio than the price they are asking).
>
> Appreciate any thoughts here and thanks, in advance.
>
> AB
>
>

2202. FDK Multi VFO 144-148MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 17:54:17 UTC
From: la8ak.xnd@online.no
Message-ID: <3c94d317.16287520@news.online.no>
Source record: 45545

Need info for Fukuyama Electronics Multi VFO which covers 144-146 and
146-148MHz. Haven't the faintest clue what it is, what sort of signal
outputs has it, is circuit diagram available at some site?

73,
Jan-Martin
--
remove ,xnd to reply

2203. 200 radio/electronic projects many with pcb foils

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 17:55:11 UTC
From: Isacc Newman <someone@micro$oft.com>
Message-ID: <3M4I8.32897$I93.6442206@newsb.telia.net>
Source record: 45546
Cross-posted to: rec.ham-radio,rec.radio.amateur.antenna,uk.radio.amateur,rec.radio.amateur.homebrew

Hi all,

HF, VHF, Antennas, Transmitters, Receivers, Wireless microphones, VHF FM Broadcasting. SSB, RTTY, CW, Kits, Synthesisers, EPROMS (in both digital and anali�gue circuits). Is there anything there that interests you?

Come to http://pmp3.net/harry for a lot of homebrew radio/electronics fun (if you want to be 100% serious or be miserable then perhaps it may not be the right place for you).

There are not very many links, though. Sorry! Just a few component suppliers and the odd "usefull" page.

BR from Harry - SM0VPO

2204. Re: Alliance U-100 controller schematic?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 18:03:31 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <TT4l8.15768$7B2.468871@news1.east.cox.net>
Source record: 45448
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Did you replace it with a NON-POLARIZED motor run capacitor?
That is an AC cap, and 5-mfd will not make a difference. Lot at the
tolerance ratings.

Pete

"KC8SSG" <kc8ssg@qsl.net> wrote in message news:9c5l8.362$AK4.5382@news...
> I need a copy of my controller schematic. My controller worked fine and
now
> it doesn't work at all. It had a 155uF 50v cap in it so I figured it was
> that. I replaced it with a 150uF 50v and it doesn't work at all. I'm not
> sure if that's the right one or not and would like to get this one going.
> Thanks
> Rob KC8SSG
>
>
>

2205. Need Transformer for SB-610

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 18:03:48 UTC
From: Larry Louie <y4562@comcast.net>
Message-ID: <8U4I8.271258$pN4.17234789@bin8.nnrp.aus1.giganews.com>
Source record: 45447

Anyone have spare to their needs a transformer for the Heathkit SB-610
Monitor Scope or a parts unit?

Thanks

2206. Alliance U-100 controller schematic?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 18:25:09 UTC
From: KC8SSG <kc8ssg@qsl.net>
Message-ID: <9c5l8.362$AK4.5382@news>
Source record: 45544
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I need a copy of my controller schematic. My controller worked fine and now it doesn't work at all. It had a 155uF 50v cap in it so I figured it was that. I replaced it with a 150uF 50v and it doesn't work at all. I'm not sure if that's the right one or not and would like to get this one going.
Thanks
Rob KC8SSG

2207. Re: Alliance U-100 controller schematic?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 19:07:01 UTC
From: KC8SSG <kc8ssg@qsl.net>
Message-ID: <pP5l8.363$AK4.5291@news>
Source record: 45449
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I replaced it with a non-polarized one but the one that was in there was polarized. and the guys that know what they are doing said that it should be non
" Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message news:TT4l8.15768$7B2.468871@news1.east.cox.net...
> Did you replace it with a NON-POLARIZED motor run capacitor?
> That is an AC cap, and 5-mfd will not make a difference. Lot at the
> tolerance ratings.
>
> Pete
>
> "KC8SSG" <kc8ssg@qsl.net> wrote in message news:9c5l8.362$AK4.5382@news...
> > I need a copy of my controller schematic. My controller worked fine and
> now
> > it doesn't work at all. It had a 155uF 50v cap in it so I figured it was
> > that. I replaced it with a 150uF 50v and it doesn't work at all. I'm not
> > sure if that's the right one or not and would like to get this one
going.
> > Thanks
> > Rob KC8SSG
> >
> >
> >
>
>

2208. website update of ON4CAY !

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 19:50:33 UTC
From: Ronny <tryit3@hotmail.com>
Message-ID: <ds6l8.14137$DE4.1729@afrodite.telenet-ops.be>
Source record: 45450

Hi all,

Thanks for reading this message.
I just updated my website with new versions of AGWP software, addition of a description how to use your soundcard for AirNav .. and several minor adaptions and updates of equipment data ...

Enjoy surfing and please do not forget to sign the guestbook !!

73s de ON4CAY
Ronny
www.on4cay.com

2209. Bird 67 question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 19:57:22 UTC
From: Yrrah <harke.smits@hccnet.nl>
Message-ID: <a72rm2ehh1@news.hccnet.nl>
Source record: 45451

Hi all,

I have a Bird 67 dummy load (30 -500MHz, 500 W). No meter available. Can someone clear me up on how this thing works? It has three odd plugs on its pig shaped nose marked with power ranges. I like to use its power measuring features. It measures 51 ohms so I guess the lower f-border has something to do with the metercircuit.
Thanks in advance,
Harke PA0HRK

2210. Re: Alliance U-100 controller schematic?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 21:34:22 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <yZ7l8.17441$7B2.511792@news1.east.cox.net>
Source record: 45452
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Yes, it should be non-polarized. I had one of those rotators, and I can't find the manual
for you. Sorry. But you can order one from this gentleman:
http://www.sarrio.com/sarrio/rsman1.html
if no one can help you. BTW, I think that unit came in a few different revisions over the years--
mine dated from my highschool days in the '60s! Good luck.

Peter

"KC8SSG" <kc8ssg@qsl.net> wrote in message news:pP5l8.363$AK4.5291@news...
> I replaced it with a non-polarized one but the one that was in there was
> polarized. and the guys that know what they are doing said that it should be
> non
> "

2211. Re: Alliance U-100 controller schematic?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 22:31:23 UTC
From: Lou <tech@dp.net>
Message-ID: <a737aq$17j0$1@news.dp.net>
Source record: 45453
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Still need the schematic? I think I have it..... Can look if you still need
it. Reply directly. Thanks.

--
Lou
Owner of: C.L. FURLONG ENTERPRISES

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Closed on Holidays

"KC8SSG" <kc8ssg@qsl.net> wrote in message news:pP5l8.363$AK4.5291@news...
> I replaced it with a non-polarized one but the one that was in there was
> polarized. and the guys that know what they are doing said that it should
be
> non
> " Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message
> news:TT4l8.15768$7B2.468871@news1.east.cox.net...
> > Did you replace it with a NON-POLARIZED motor run capacitor?
> > That is an AC cap, and 5-mfd will not make a difference. Lot at the
> > tolerance ratings.
> >
> > Pete
> >
> > "KC8SSG" <kc8ssg@qsl.net> wrote in message
news:9c5l8.362$AK4.5382@news...
> > > I need a copy of my controller schematic. My controller worked fine
and
> > now
> > > it doesn't work at all. It had a 155uF 50v cap in it so I figured it

was
> > > that. I replaced it with a 150uF 50v and it doesn't work at all. I'm
not
> > > sure if that's the right one or not and would like to get this one
> going.
> > > Thanks
> > > Rob KC8SSG
> > >
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>

2212. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 23:40:18 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <2v9a9usffeb4sqkuuo3slcnuu4gd0b9fph@4ax.com>
Source record: 45454

On Sun, 17 Mar 2002 10:21:08 +0000, "Ian White, G3SEK" <G3SEK@ifwtech.com> wrote:
>Gary Coffman wrote:
>>The only real difference is the way the connectors are locked together
>>by their external rings, one using the bayonet cam, the other using a
>>threaded ring. Neither locking mechanism has any effect on the electrical
>>properties of the connectors. Contact force is provided by the spring
>>fingers of the respective contacts in both cases, and they are identical.
>>
>
>The contact geometries are identical, but the contact forces on the
>outer-conductor connection are not.
>
>The mating surfaces are very slightly tapered, so the radial contact
>force is generated by the pulling-together force between the two shells.
>On the N connector or the TNC, you can screw the ring down until the
>rubber washer inside the plug is fully compressed. On the BNC (or the C,
>which is an N-size bayonet connector) the washer is *never* completely
>compressed in the locked position - or else you couldn't make it click
>into place - so the contact force is less. This opens up the
>possibilities of reduced performance.
>
>The practical difference is that you can always rotate a BNC or a C
>plug when it's mated - and as the rubber washer ages under compression,
>the contact force on the outer conductor can become very unreliable. You
>can't rotate an N or a TNC - even with an old washer, you simply screw
>down the ring a little further and the contact force is just like new.

If you actually measure things, you'll find that the N bottoms on the shell
faces before bottoming the contacts. So in reality you can't tighten it any
more than a BNC. The only difference is that you can't feel it, because
the shell has bottomed. (Note, the shell plays no part in the electrical
performance of the connector.)

Gary

2213. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-17 23:53:39 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <tbaa9ucaqjcq8tbegdqnri9lkl09ph323s@4ax.com>
Source record: 45455

On Sun, 17 Mar 2002 15:37:32 GMT, gaschafer@attbi.com (Gary Schafer) wrote:
>Plugging a type N into a BNC does work but it is not a good idea. (I
>can hear more flames
>coming) If you look closely the type N center pin is slightly larger
>than the BNC pin. It will
>distort the center contact on the BNC female. Then when you go and put
>a BNC back in it will
>sometime not make good contact again.

This situation only exists if you try to plug a 50 ohm N male into a 75 ohm
BNC female (Yes, they come in two different impedances). The 50 ohm pin
is bigger than the 75 ohm socket. For same impedance connectors of either
series, the pin diameters are *exactly* the same.

The more likely cause of damage when pushing an N male onto a BNC
female is that you will *cock* the connector while inserting it. This will
damage the center female contact.

Note, both of these connectors are considered *assembly* connectors.
After a few plug and unplug cycles, they *will* become loose, no matter
what precautions you take. Good quality connectors used carefully can
last a few hundred plug/unplug cycles, but you do have to replace them
periodically if you do much plugging and unplugging.

Gary

2214. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 00:00:12 UTC
From: gaschafer@attbi.com
Message-ID: <3c952d04.3579898@netnews.attbi.com>
Source record: 45456

On Sun, 17 Mar 2002 16:20:08 +0000, "Ian White, G3SEK"
<G3SEK@ifwtech.com> wrote:

>Gary Schafer wrote:
>>Plugging a type N into a BNC does work but it is not a good idea. (I
>>can hear more flames coming) If you look closely the type N center pin
>>is slightly larger than the BNC pin. It will distort the center contact
>>on the BNC female. Then when you go and put
>>a BNC back in it will
>>sometime not make good contact again.
>>
>Yes, sorry - you're right, they are similar enough to be almost
>compatible, but not identical. Putting an N plug into a BNC socket is
>not a good idea anyway, because there is nothing to hold the two
>connectors together.
>
>>I have an old HP 141 also and yes it does have BNC connectors on the
>>rf. There were several manufacturers that used them in the past. With
>>more recent equipment where there is more concentration of work being
>>done in the higher frequencies I think
>>that the realization is a little
>>clearer of the shortcomings of the BNC.
>>Motorola manufacturers a service monitor that goes to 1ghz. The common
>>cable used by the radio people using the unit is bnc. I asked the
>>Motorola engineers why they did not supply the unit with a BNC
>>connector as they do ship an N to BNC adapter with the unit. The answer
>>was that it was impossible to reach the flatness response spec above
>>about 700 mhz.
>
>Like other contributors, I find that statement surprising. For a
>non-precision instrument operating only up to 1GHz, BNCs in good
>condition should be plenty good enough. On the other hand, it might seem
>more reasonable if they had qualified the statement in some way, for
>example by saying that it was impossible to do it reliably, in the long
>term, and/or with worn-out BNC plugs.
>
>So they use an N connector on the instrument, and then supply an N to
>BNC adapter... yeah, right...
>
>--
>73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
> 'In Practice' columnist for RadCom (RSGB)
> http://www.ifwtech.com/g3sek

When I first heard that I was kind of surprised myself. But I have heard similar from other
manufacturers too. I had always viewed the N and BNC as very similar connectors. But it
seems that as you approach 1ghz things get a little trickier. The service monitor in question is
specked at +_ 2 db from 400 khz to 1ghz. Supposedly in order to maintain the +_ 2db they
had to use an N connector. Most all of the end users would have preferred the BNC connector
as that seemed to be kind of the standard with most shops. In the early days of 800 mhz radios
it was difficult to find an N connector jumper cable in a 2 way radio shop. Most all equipment
had uhf connectors and most test equipment had BNC connectors. When the service monitors
with N connectors came in the door everybody complained about it. Motorola was asked to
supply the monitors with a BNC connector but would not do so. The solution to the problem
was to supply the N to BNC adapter with the equipment. The spec is with the N connector
only. No adapter.

Now once the shops got heavily into the 800 and 900 mhz equipment, most all now use a
proper cable with the N connector for the higher frequencies.

It is absolutely true that they supply an N to BNC adapter with each unit as a standard included
accessory. I used to sell them for a number of years.

73
Gary K4FMX

2215. Re: If the MFJ-212 Matchmaker is not a noise bridge, then what is it?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 00:24:22 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <9kca9us2tmsktmaqdpsjvnmmpv09ef5p4m@4ax.com>
Source record: 45457
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Sun, 17 Mar 2002 00:28:08 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>On 16 Mar 2002 16:23:48 -0800, jason_hsu@my-deja.com (Jason Hsu)
>wrote:
>
>>http://www.mfjenterprises.com/products.php?prodid=MFJ-212
>>
>>Jason Hsu, AG4DG
>
>Why do you presume it is not?
>
>73's
>Richard Clark, KB7QHC

Hi Jason,

First the concept of the bridge. It exhibits a null to the detector when all four arms are balanced with respect to each other. There are many respects and many topologies to observe these relationships; however, when you boil down the designs, they are all closely related if not identical - hence my suggestion for you to reduce those circuits as an exercise. You will find much enlightenment in such an exercise still, even after my lucid explanation. :-)

Being able to "see" an opportunity for a bridge solution for a measurement problem is ALWAYS preferable. A balanced bridge presents absolutely no load to the item being measured and by this becomes invisible to the process. Bridges bring isolation, sensitivity, resolution and accuracy. To illustrate, you may not be able to afford a DC or low AF (audio) AC meter with 4 place accuracy (not to be confused with 4 digit display); but you may, with work, build an inexpensive bridge accurate at AF to 6 places and very respectable in HF. Note, as you depart from low frequencies, instrumentation accuracy plummets, and bridge techniques become even more necessary.

Second, the balance of the bridge. This may obtained by holding the "unknown" constant while you derive its value by the inference of control settings (what you have in mind in some sense, and perfectly justified). OR, the balance may be obtained against a constant reference by adjusting the "unknown."

This second method is cheaper to manufacture, calibrate, and simple to use. The first requires cumbersome shaft coupling for critical, large component placement; and (for precision) special shielding to balance

stray coupling.

Third, the source of white noise. By strict definition, white noise is constant in amplitude at every frequency. This again is a commercial consideration in that the designer need not build an extra stable source capable of wide frequency span. This last requirement of stability, as you may now guess, is strictly required if you are to seek and hold a sharp, deep null (it is an absolute pain to chase a drifting source).

Fourth, the operation of a noise bridge. As I said, R1-C1 are the reference and you should note that the ARRL design (and perhaps the MFJ) adds a 100 Ohm resistor to the "unknown" port. This means that without ANY other connection made, the bridge is already in balance. If you observe otherwise, it means that C1 is not adjusted correctly. This presents a simple, one-time solution for that problem by simply tweaking C1. Now, once observing this verity (the already mentioned null) and adding your reactive load to the 100 Ohm resistor at the "unknown" port, you run the risk of unbalancing the bridge if that reactance upsets the effective 100 Ohm requirement. You then rebalance the bridge in one of two ways. You shift your receiver's frequency until the noise abates, or you shift the component that presents the reactance until the noise abates at the original frequency. The first method determines the resonate frequency of the "unknown." The second method forces the "unknown" to resonate at the original frequency. This, of course, presumes a parallel resonance that presents infinite impedance whereupon the 100 Ohm resistor seems to be the only component residing at the "unknown" port (and balance is assured).

Note the emphasis on parallel resonance (it simplifies this instruction). This works with traps, but is not indicative of antennas (except for halfwave). This may sound like a paradox for the intended application, so there are other considerations to be observed in either the application of the bridge, or in its design. The observance and cogitation of those differences are left as an exercise.

The upshot of this all, is that you need to think abstractly in terms of the bridge topology, its design requirements, its actual design, and its application. Reduce all design issues to the bare minimum and replace the "unknown" with a simple L-C-R configuration to determine just how well the bridge may perform. Playing with a SPICE emulator like Electronic Workbench would do wonders to illustrate these concepts.

73's
Richard Clark, KB7QHC

2216. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 01:25:47 UTC
From: gaschafer@attbi.com
Message-ID: <3c9540ca.8642358@netnews.attbi.com>
Source record: 45458

On Sun, 17 Mar 2002 18:53:39 -0500, Gary Coffman <ke4zv@bellsouth.net>
wrote:

>On Sun, 17 Mar 2002 15:37:32 GMT, gaschafer@attbi.com (Gary Schafer) wrote:
>>Plugging a type N into a BNC does work but it is not a good idea. (I
>>can hear more flames
>>coming) If you look closely the type N center pin is slightly larger
>>than the BNC pin. It will
>>distort the center contact on the BNC female. Then when you go and put
>>a BNC back in it will
>>sometime not make good contact again.
>
>This situation only exists if you try to plug a 50 ohm N male into a 75 ohm
>BNC female (Yes, they come in two different impedances). The 50 ohm pin
>is bigger than the 75 ohm socket. For same impedance connectors of either
>series, the pin diameters are *exactly* the same.
>
>The more likely cause of damage when pushing an N male onto a BNC
>female is that you will *cock* the connector while inserting it. This will
>damage the center female contact.
>
>Note, both of these connectors are considered *assembly* connectors.
>After a few plug and unplug cycles, they *will* become loose, no matter
>what precautions you take. Good quality connectors used carefully can
>last a few hundred plug/unplug cycles, but you do have to replace them
>periodically if you do much plugging and unplugging.
>
>Gary
>

Well I don't think that is right. I just went and dug out some N and
BNC connectors including
some 75 ohm and 50 ohm BNC's. Both the 50 ohm and 75 ohm BNC's have
what appears to
be exactly the same size center pins on the male plugs. There is a
difference in the body size of
the center pins though. The 75 ohm ones are bigger! But the part of
the pins that mate with the
female jacks are the same size.

The center pins on the type N connectors (the part that mates with the
female jack) are in fact
larger than the BNC pins. So that makes them incompatible. Yes they
will plug in but as I stated
before it will damage the female jack to plug an N into a BNC.

Looking further at the N and BNC center pins, the N center pin's body (ahead of the mating
part) is also much larger than the equivalent part of the BNC. While the outer contact (coax
ground) is the same as the BNC! This larger part of the center pin in both the N and BNC
connector is located partly inside the ground shield. This part makes up a short length of solid
coax cable. So with the outside being the same diameter on both connectors and the center pins
having different diameters, it is impossible for them the both have the same impedance
characteristics. Although at low frequencies this short length (about 1/4") has little effect, at the
higher frequencies it would seem that it would come into play.

73
Gary K4FMX

2217. BC100XLT repair

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 03:51:26 UTC
From: ballgofar@retardsrule.com
Message-ID: <302f180.0203171951.5b8de32c@posting.google.com>
Source record: 45459

Can you tell me how to find this Q201 everyone seems to be talking about?
I have a BC100XLT that has all the symptoms of this seemingly coomon problem yet I dont know how to locate it on the board. Any help would be greatly apprciated. Someone HAS to have done this repair?! PLEASE HELP if at all possible.

Thanks,

Paul

Uniden/Bearcat BC200XLT Portable - Loss of Audio and Dial Lamp
If you can program frequencies into your BC200XLT but there is no audio and
the green backlight no longer functions, a tiny transistor may have failed.
Check for a defective PNP surface mount transistor, Q201 (2SB815B6-YDY).
Q201 is used as a switch to furnish 8 VDC to several stages of the BC200XLT.
Its main purpose is to switch off power hungry stages of the BC200XLT when
the CPU thinks the NiCd voltage has fallen below a threshhold. That's an
attempt to limit the current drain on weak NiCds to avoid permanent damage.

Q201 is located on the foil side of the "Micom" board, adjacent to the black
multi-pin connector which mates the Micom and main boards together.

Q201 can be destroyed by a few different causes, primarily, by something in
the scanner drawing too much current through it. In one case, capacitor C36
shorted. It's a 220 uF 10v electrolytic, located on the component side of
the main board, connected from pin 8 of the audio IC (IC2 NJM386SL) to ground. Capacitor C55 shorted in another BC200XLT. Gary Bean reports he
substituted a 2SA1298 for Q201 and it worked fine. In a pinch you bypass
Q201 by soldering a short piece of bare wire between the collector and emitter, but you must first fix the component which caused Q201 to fail

2218. Re: Celwave VHF BA1010-1 Omni Fiberglass Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 04:30:01 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3c9570fd_2@news1.prserv.net>
Source record: 45460
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.swap,rec.radio.amateur.homebrew,alt.ham-radio.vhf-uhf,alt.ham-radio.marketplace

You might want to modify the fraudulent description of the frequency range you have given it. My Celwave (and Tessco and Hutton) catalog says it is 18 MHz wide, manufactured somewhere between 118 and 174 MHz, like either of the standard models, 146-164 or 154-174 MHz. Where on earth did you get the idea it would work from 25 to 299.9? From the catalog index? Sorry, it doesn't work that way.

--
Crazy George
Remove NO and SPAM from return address
Radiodork <wickedlittlecritter@msn.com> wrote in message
news:1404fdf3.0203161222.50849288@posting.google.com...
> This antenna was used for several years under moderate load (100-200
> watts). This unit has been in storage since it was taken out of
> service and replaced with a directional unit in late 1998. Sold as is,
> not tested since it was removed from service in perfect working order.
> $50 OBO.
>
> http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1713202648

2219. AMRAD Active LF Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 05:37:51 UTC
From: Jim Bo <jbollit@ix.netcom.com>
Message-ID: <3C957D2F.37C7A7A0@ix.netcom.com>
Source record: 45461

Where can I get a copy of the September 2001 QST article that
details an active antenna?

I have searched the web and have not found a site that has the
constructions details.

Please e-mail with the URL (if there is one) that provides all
the necessary details to construct this antenna/pre-amp combo.

I will only be able to access e-mail for the next two weeks, the
news groups are not available for me, so please e-mail me.

Thanks in advance.

Jim
*

2220. Re: NBFM audio demodulation at high IFs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 06:29:17 UTC
From: k7itm@aol.com
Message-ID: <3200347.0203172229.13a9141d@posting.google.com>
Source record: 45462
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

blackm00@cam.org (Michael Black) wrote in message
news:<6447bcd3.0203162144.1c8ec3f2@posting.google.com>...
> I was sure I'd seen a filter used instead of an LC circuit in a quadrature
> detector. ...

You're probably not just imagining it. RCA shows a double-tuned
circuit for the quad network in some of its data sheets. The
double-tuned circuit presumably gives better phase linearity than a
single-tuned circuit with the same total phase differential over the
bandwidth.

Cheers,
Tom

2221. Re: Radiation from monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 08:26:30 UTC
From: post_to_usenet@hotmail.com
Message-ID: <b6b4e772.0203180026.483c6ca3@posting.google.com>
Source record: 45463

bpasaric@mac.com (Bozidar Pasaric) wrote in message
news:<rhbys2.1x5lusy1xf6cg0N%bpasaric@mac.com>...
> I have made the following experiment: I took a PC monitor and ...
>
> Factories never give any data of the X-radiation of their screens. How
> strong is it? Some people sit by the screen for 8 hours a day, 250
> workdays a year - year after year. How dangerous is it? Does anyone
> know something more about it? Why don't factories pulbish that
> radiation in radiation units? Any comments?
>
> Bozidar, 9A2HL

Hi,

I am, too, worried about radiation from monitors, but you can forget
about it, because in a very short time (months to a couple of years)
most people will be working with TFT flat monitors, and these, AFAIK,
don't emit any harmful radiation.

OTOH, what you should worry about for the time to come is the myriad
of wireless devices you will have on your desktop. Yes, I know that 30
mW is very little, but when you have 10 of them (mouse, keyboard, pc,
printer, scanner, laptop, pdaï¿½) that will amount to 300+ mW being
radiated in your close vicinity (less than 1 meter) PERMANENTLY for 8
(..10 ..12?) hours a day for years. Yes, I know these devices are
supposed to reduce power to minimum required themselves, but I have
seen most people "turn up" power to maximum "cause this way is
better".

Now, I am not sure _long_ exposures to 300 mW @ 2.4 GHz are of medical
consideration, but until I see some _serious_ studies (long term, long
exposure effects) made by someone who I can believe to be
_rigorous_and_unbiased_, I won't be happy about it.

Toni

2222. Gross understatement!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 10:51:16 UTC
From: Erik Stafette <someone@microsoft.com>
Message-ID: <a74gpgdff1@newstoo.ericsson.se>
Source record: 45464
Cross-posted to: rec.ham-radio,rec.radio.amateur.antenna,uk.radio.amateur,rec.radio.amateur.homebrew

Bit of an understatement! Just how many projects have you got on there?

>HF, VHF, Antennas, Transmitters, Receivers, Wireless microphones, VHF FM
>Broadcasting. SSB, RTTY, CW, Kits, Synthesisers, EPROMS (in both digital
and
>anali�gue circuits). Is there anything there that interests you?
>
>Come to http://pmp3.net/harry for a lot of homebrew radio/electronics fun
>(if you want to be 100% serious or be miserable then perhaps it may not be
>the right place for you).
>
>There are not very many links, though. Sorry! Just a few component
suppliers
>and the odd "usefull" page.
>
>BR from Harry - SM0VPO

2223. Re: Re: spelling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 10:53:38 UTC
From: Erik Stafette <someone@microsoft.com>
Message-ID: <a74gttdos1@newstoo.ericsson.se>
Source record: 45465
Cross-posted to: rec.ham-radio,rec.radio.amateur.antenna,uk.radio.amateur,rec.radio.amateur.homebrew

Do you use an English dictionary or an American dictionary? Perhaps you need a bit of help with the spelling, or is that part of the fun?

Isacc Newman wrote in message <3M4l8.32897$l93.6442206@newsb.telia.net>...
>Hi all,
>
>HF, VHF, Antennas, Transmitters, Receivers, Wireless microphones, VHF FM
>Broadcasting. SSB, RTTY, CW, Kits, Synthesisers, EPROMS (in both digital
and
>anali�gue circuits). Is there anything there that interests you?
>
>Come to http://pmp3.net/harry for a lot of homebrew radio/electronics fun
>(if you want to be 100% serious or be miserable then perhaps it may not be
>the right place for you).
>
>There are not very many links, though. Sorry! Just a few component
suppliers
>and the odd "usefull" page.
>
>BR from Harry - SM0VPO
>
>

2224. Fingerstock

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 11:58:29 UTC
From: vk6ttnilspam@optusnet.com.au
Message-ID: <3c95d52f.114930@news.optusnet.com.au>
Source record: 45466

Hi all,

has anyone sourced fingerstock for a homemade screwdriver antenna? If so, please share with me where to purchase such material.

Thanks in advance
Richard

2225. FA B&K E200D Solid State Signal Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 12:55:53 UTC
From: David Messing <dmessing@alltel.net>
Message-ID: <3C95E3D9.133259A4@alltel.net>
Source record: 45467

I have a B&K E200D Solid State Signal Generator listed for auction on
Ebay.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1714125105

Dave
K0RWM

2226. Re: crystal filters and overtones

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 13:33:50 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0203180533.68c112a1@posting.google.com>
Source record: 45468

I've wondered this myself.

Jim
N8EE

<g_and_s_pearce@xtra.co.nz> wrote in message news:<3c93b160$1@zfree.co.nz>...
> Hi
>
> Can you use crystals operating in their 3rd or 5th overtone modes in ladder
> filters? Is this a way to get narrow band high if crystal
> filters? I suspect not as I've not seenit done .. what is the thing preventing
> this
>
> Thanks
>
> Stephen zl1any
>
>
> http://www.zfree.co.nz

2227. Love Your Heathkits?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 15:14:59 UTC
From: Gary <gary@heathkits.com>
Message-ID: <Tvnl8.24347$P4.2155402@newsread2.prod.itd.earthlink.net>
Source record: 45469

take a survey www.heathkits.com

--
Gary K�IMJ 45 years of Heathkit fun http://www.heathkits.com

2228. KW 107 Super Match - panel instrument needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 15:18:10 UTC
From: Per Enocson <per.enocson@telia.com>
Message-ID: <Synl8.33092$l93.6487796@newsb.telia.net>
Source record: 45470

Looking for a replacement SWR/ power panel meter for the KW-107. My old instrument is mechanically finished after many years of service. Original or similar 100 mikroamp 80x80 mm panel measure. Anyone who can help me ?

73ï¿½s / Per SM0WRA

2229. Looking for Plessey SL630 datasheet...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 17:08:34 UTC
From: mail@f5iko.com
Message-ID: <99e2cce8.0203180908.a845a61@posting.google.com>
Source record: 45471

Hi OMs,

I'm looking for SL630 datasheet.
Can you help me?
Many thanks in advance.

de Yannick.....F5IKO

2230. KK7B T2 alignment help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 18:35:25 UTC
From: jehancoc@pacbell.net
Message-ID: <a95870c1.0203181035.729083c1@posting.google.com>
Source record: 45472

I bread-boarded the KK7B T2 phasing exciter and I am trying to tune it. I only have a DC receiver to listen to the signal but I have a 300mhz scope and I am using a PC sound card to generate signals.

The output into a 50ohm resister looks o.k. except for 20mv carrier leakage due to grounding. This goes away if I remove the connections to the mixers from the audio board.

I also don't have the output filter on it since I plan on boosting the output to 5w.

I am using the twisted-wire quadrature LO phase network described in QEX January 98.

When I run a two-tone (800hz and 1800hz) into the exciter, I get a nice eyeball pattern that I can adjust with the drive. I also noticed that I can peek this with the T2 audio balance

Putting a single tone into the exciter, I don't get what is expected according to my 1970 copy of SSB for the radio amateur. (alright, so I've been out of this for a while) According to that book, I should see a relatively flat, broadband type scope display, with no ripples on the top or bottom edges.

I can stabilize the display using the variable sweep on the scope. The top edge looks ok. The bottom edge has a sine wave loop that sticks out from the broadband image. Something like this:

```
--------------------------------

----\ /----\ /----\ /--
\--/ \--/ \--/
```

No adjustments make this go away. It looks like it is the 800hz tone of the two-tone test.

I can change the single tone into an eyeball pattern by swinging the balance full clock or counter clock. Does this make sense?

When I measure the LO phase it look almot perfect at 90 degrees. The SBL-1 mixers both have a slightly distorted signal at the LO input of about .65 volts. I assume this is due to the diode clipping/loading?

The audio looks really close to 90 degrees when I adjust it using the balance control. I assume for best sideband suppression and carrier null the audio inputs to the SBL-1 mixers should be equal?

Anyway, can someone give me a few hints as to what is going on and/or suggest a way to tune this with building a single image receiver?

Thanks in advance.

2231. In need of a PCB Manufacturer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 19:16:56 UTC
From: Steve <steve34613@atlantic.net>
Message-ID: <3C963D28.2506@atlantic.net>
Source record: 45473

Hi,

I'm in need of the name and address of a small company that can make
small
inexpensive printed circuit boards for private individuals. There was a
place
called Atlas Circuits but I think their no longer in business.

If you can help me, please email me at: steve34613@atlantic.net

Thank you
Steve

2232. Re: In need of a PCB Manufacturer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 19:55:37 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <ZCrl8.287547$pN4.18648279@bin8.nnrp.aus1.giganews.com>
Source record: 45474

AP Circuits is recommended by the writers of a couple books. Their prices look good. I have used www.expresspcb.com and the turnaround was exactly as described, but they weren't as inexpensive as the former.

Jack exWA8PZL
"Steve" <steve34613@atlantic.net> wrote in message
news:3C963D28.2506@atlantic.net...
> Hi,
>
> I'm in need of the name and address of a small company that can make
> small
> inexpensive printed circuit boards for private individuals. There was a
> place
> called Atlas Circuits but I think their no longer in business.
>
> If you can help me, please email me at: steve34613@atlantic.net
>
> Thank you
> Steve

2233. Alinco EDX-2 with any radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 20:14:02 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3C964A8A.764DE714@oda.com.au>
Source record: 45475
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

The Alinco EDX-2 is an automatic end-fed-wire tuner that integrates with a couple of Alinco HF radios, including the DX70-TH.

I am aware that some folk have used this tuner independently of the Alinco transceivers.

Has anyone information on the protocol for controlling this antenna tuner so that I can make a controller that will allow it to be used safely and reliably with other radios?

Thanks... Owen

2234. Re: NBFM audio demodulation at high IFs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 20:20:56 UTC
From: "Carl R. Stevenson" <wa6vse-shack@fast.net>
Message-ID: <3c964d6c_1@news7.fast.net>
Source record: 45476
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

"Tom Bruhns" <k7itm@aol.com> wrote in message
news:3200347.0203172229.13a9141d@posting.google.com...
> blackm00@cam.org (Michael Black) wrote in message
news:<6447bcd3.0203162144.1c8ec3f2@posting.google.com>...
> > I was sure I'd seen a filter used instead of an LC circuit in a
quadrature
> > detector. ...
>
> You're probably not just imagining it. RCA shows a double-tuned
> circuit for the quad network in some of its data sheets.

If you are talking about the RCA CA3089, that device dates to
the early 1970's ... there are much better solutions available.

> The
> double-tuned circuit presumably gives better phase linearity than a
> single-tuned circuit with the same total phase differential over the
> bandwidth.

This is true ...

On the issue of "filters" there were also some XTAL and Ceramic
resonator-based parts designed to replace the "quad coil" in the
same sort of detector ... their advantage was fixed tuning and with
higher Qs, larger recovered audio swings.

Carl - wa6vse

2235. Re: Looking for Plessey SL630 datasheet...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 20:57:39 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c965486.12088269@news.freeserve.net>
Source record: 45477

On 18 Mar 2002 09:08:34 -0800, mail@f5iko.com (Yannick) wrote:

>Hi OMs,
>
>I'm looking for SL630 datasheet.
>Can you help me?
>Many thanks in advance.
>
>de Yannick.....F5IKO
I believe so, but probably not the 'full' sheet.
email me if its enough for your needs.
atb Mike W

2236. Re: Need 8051 Help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 21:37:21 UTC
From: SkipP <skipp@pilotNOSPAMPLEASE.ucdavis.edu>
Message-ID: <a75mmhssp1@woodrow.ucdavis.edu>
Source record: 45494

I have suncoast's contact information, reply to my email address with the nospamplease removed and ask me for it. I also have some great web links to 8051 stuff.

cheers
skipp@pilotNOSPAMPLEASE.ucdavis.edu

: Steve <steve34613@atlantic.net> wrote:
: Hi,

: I'm looking for a 64 page instruction booklet for the 8051
: microcontroller. Its titled "Assembly Language Basics"

: It was published by a company called Suncoast Technologies of Spring
: Hill FL 34606.

: The booklet was sold around 1995-96 for $15.00.

: If you have this book, please email me at: steve34613@atlantic.net

: I would like to purchase a copy. Please email me if you have this
: booklet; as I am unable to log into these NGs everyday to check for
: responses.

: Thank You
: Steve

2237. Re: spelling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 21:50:44 UTC
From: la8ak.xnd@online.no
Message-ID: <3c963665.3424514@news.online.no>
Source record: 45478
Cross-posted to: rec.ham-radio,rec.radio.amateur.antenna,uk.radio.amateur,rec.radio.amateur.homebrew

On Mon, 18 Mar 2002 11:53:38 +0100, "Erik Stafette"
<someone@microsoft.com> wrote:

>Do you use an English dictionary or an American dictionary? Perhaps you need
>a bit of help with the spelling, or is that part of the fun?
>

perhaps 'someone' just need assistance in his limited English world ?
--
remove ,xnd to reply

2238. Re: Terk Advantage AM Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-18 23:07:04 UTC
From: Bill Otten <res0958z@verizon.net>
Message-ID: <squl8.17010$e33.12041@nwrddc01.gnilink.net>
Source record: 45479
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.space

Daniel,
Do these antennas and radio's you've been advertising here even WORK on the satellites? I didn't think so. Are they homebrew radio's or antennas? I didn't think so. How about NOT cross posting this to all the radio newsgroups and taking up bandwidth with this advertisement? Spammer.

"Daniel Simpson" <dzan@qwest.net> wrote in message
news:u9bv6hqtklbf52@corp.supernews.com...
> FA: Terk Advantage AM Antenna
>
> Finally an AM antenna that is truly beautiful!
>
> When appearance is an issue you finally have a great choice! It has
> most of the power of a Select-A-Tenna plus it is a handsome addition to
> any decor. It comes with wires like the Select-A-Tenna Hardwire model
> for direct connection to your stereo or can be used like the regular
> model Select-A-Tenna. It certainly blows away any of the smaller
> antennas supplied with a stereo. Size: 9.5" high.
>
> The Terk AM Advantage AM antenna dramatically improves the AM reception
> from any receiver, tuner or portable radio. Its unique passive wireless
> technology eliminates the need for connectors, batteries and power
> cords - simply place the AM Advantage near the receiver or radio.
>
> The AM Advantage combines wireless convenience with advanced tuning
> technologies such as Terk's exclusive Pin-Dot Pre-Tuning" that zeroes
> in on even hard-to-get stations by tuning the antenna to the station's
> frequency.
>
> Features:
>
> * Pin-Dot Pre-Tuning dial adjusts antenna to a specific frequency for
> best reception of individual stations
> * Compact design allows easy placement
> * Non-skid base keeps antenna in place during adjustment
> * Reception pattern: Omindirectional
> * Dimensions: 9.5"H x 9.5" W x 2.5"D
> * Wire For Direct connection
>
> AM Advantage Q&A
> Does this antenna need power for it to work? Also, how can I connect it
> to my radio?
> The AM Advantage is designed for "wireless operation"--that is, it does

> not need AC or battery power and will actually provide signal to your
> radio or receiver without having to be connected with wires. However,
> if your radio or receiver has connections for an external AM antenna,
> we supply a wire with the AM Advantage to connect the antenna to the
> input, should you choose to do so. The solid black wire connects to the
> terminal on the radio or receiver labled "AM in," while the wire with
> the white stripe on it connects to the terminal labeled "ground."
>
> Can I extend the wire on my AM Advantage to place it on a windowsill or
> somewhere away from my receiver?
> You can extend the wire with by splicing it with insulated doorbell
> wire, which is available at any do-it-yourself electronics or hardware
> store. However, we do not suggest doing this, because the length of the
> wire is calibrated to correspond with the tuning dial on the AM
> Advantage. When you extend the wire on the AM Advantage, you also
> change the resistance of the antenna, which will cause the station
> indications on the dial to be inorrect.
>
> Why does my antenna work better when I touch it?
> When you touch the antenna with your feet on the ground, your body is
> actually acting as a giant antenna and affecting your AM Advantage's
> reception. You have to let go of the antenna and move away from it to
> determine its reception performance.
>
> Can I make the wires on my antenna longer?
> No. When you make an AM antenna lead longer, you make it more
> susceptible to interference. The longer the lead, the more interference
> you are likely to hear. Also, lengthening the cable will change the
> impedance of the antenna and degrade reception performance.
>
> Why does the antenna work better when my radio and antenna are next to
> a window?
> Many building materials can affect AM and FM signal reception. Metal,
> brick and stone between the radio station and the antenna will decrease
> the strength of the signal. to the antenna. However, glass does not
> block radio signals, and locating your antenna next to a window allows
> the antenna to receive a cleaner, stronger signal.
>
> This unit is in good to great shape. It shows some scuffs in the rubber
> base. and that is all.
>
> I accept Paypal, Billpoint & Money Orders. $9.00 for shipping-
> Continental US only. Insurance optional at buyers expense. Winner to
> pay within 7 Days of auctions close. Email me with questions.
>
> Thank You and Good Luck!!
>
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1340212771
>

2239. Re: simple connector question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 00:41:11 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <pnha9u49ejjqrpl8ckfsis2akntlkauctf@4ax.com>
Source record: 45480

Bill Janssen <billj@ieee.org> wrote:

>Gary Glaenzer wrote:

>> > Gary Glaenzer wrote:
>> > >
>> > > I've heard it said that 'BNC' stands for 'Baby N
>> > > Connector'.....anyone else ever heard that?

>Neill and Concelman (sp) both worked at Bell Labs. and designed
>connectors.

If you find an early Tektronix manual, it will refer to BNC connectors
as "Baby N Connectors" in the parts list. I don't think this is really
where the acronym come from, but I'll bet that it started the
confusion. Most likely this was an inside joke or just jargon among
Tek employees at the time

This post was so good that I've been saving it since 1996:

Tom Clark <clark@tomcat.gsfc.nasa.gov> wrote:

>Just to complete this thread, the series names were adopted during the MIT
>RadLab days during WW2. Here is the list as I know it:
>
>BNC=Bayonet Neill-Concellman
>TNC=Threaded Neill-Concellman
>N =Neill (twist on version for 1/2" coax)
>C =Concellman (bayonet style for 1/2" coax)
>HN =High-power Neill
>HC =High-power Concellman
>
>UHF was a pre-WW2 high frequency connector, and SMA/SMB/SMC came along after WW2.
>
>Tom Clark

-

Jim Adney jadney@vwtype3.org
Madison, Wisconsin USA

2240. MMIC questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 00:57:52 UTC
From: RaOuL <russ@bit-net.nospam.com>
Message-ID: <H2wI8.636$_T4.5665@news.bit-net.com>
Source record: 45481

Hello All!
I was at a job interview today for a microwave technician job and the subject of MMIC was brought up. I sheepishly admitted that I know nothing about MMIC and politely changed the subject. Overall I believe that the interview went well and that I'll likely be working with MMIC in some capacity in the near future. That brings me to my questions:
I know nothing about MMIC - is there a primer online somewhere? A quick search of Google didn't turn up much useful info for the newbie or casual experimenter. Are there any MMIC development kits available for the casual experimenter at a reasonable price?
Thanks in advance for any information...

73,
Russ - KB1GKN

2241. Re: MMIC questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 01:17:05 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C9691C4.77A0@pop.removethistomailme.net>
Source record: 45482

RaOuL wrote:
>
> Hello All!
> I was at a job interview today for a microwave technician job and the
> subject of MMIC was brought up. I sheepishly admitted that I know nothing
> about MMIC and politely changed the subject. Overall I believe that the
> interview went well and that I'll likely be working with MMIC in some
> capacity in the near future. That brings me to my questions:
> I know nothing about MMIC - is there a primer online somewhere? A quick
> search of Google didn't turn up much useful info for the newbie or casual
> experimenter. Are there any MMIC development kits available for the casual
> experimenter at a reasonable price?
> Thanks in advance for any information...
>
> 73,
> Russ - KB1GKN

MMICs=Monolithic Microwave Integrated Circuits. Generally seems to be used to refer to ICs that combine RF amps with broadband Z-matching components required to interface them to 50 ohms. When you use a MMIC in a 50-ohm system, you generally don't have to worry about designing your own matching networks. But you also won't get the bleeding-edge power consumption and noise-figure specs with MMICs that are possible with discretes, since the low-level aspects of the circuit design are no longer in your hands.

Spend some time at www.minicircuits.com browsing their app notes on their MAR- and ERA- series MMICs for a good introduction. Also, consider bumming free subscriptions to magazines like RF Design if you want to sound like you know what you're talking about in job interviews.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2242. Re: NBFM audio demodulation at high IFs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 01:27:13 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C969421.350E@pop.removethistomailme.net>
Source record: 45483
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Tom Bruhns wrote:
>
> And of course, a Q of 1000 is fairly low for a crystal. You might try
> a crystal with damping. Consider that the series resonance is
> normally pretty close to the parallel resonance, but if you use a
> crystal whose series resonance is below the band of interest and load
> it lightly enough with capacitance, you should be able to get the
> parallel resonance where you want, and you can add series or shunt
> resistance to adjust the Q.
>
> You could also characterize one of your 21.4MHz filters as a one-port
> to see if you get the phase response and impedance you need...if you
> do, go for it. You might find that loading the "other" port with some
> impedance helps. I don't know; I'm just guessing at things to try.
>
> Cheers,
> Tom
>

Thanks to all for the suggestions... I did have a look at the phase response of the filters, and it seemed pretty twitchy at first glance. It's clear that some matching work would have to be done to make them happy, and even then I'd probably be second-guessing the quality of the recovered audio from now on.

I decided to add a third conversion to the receiver to get down to 455 kHz, where the SA604's boilerplate app note circuit will suffice.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2243. Parts/Design for 50V, 25 Amp DC Pwr Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 01:33:29 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3C969568.2927A167@sympatico.ca>
Source record: 45484

I am looking to build a 50 V 25 Amp DC supply for a 600 Watt Quad Fet Amp -
basically the one in the Motorola Ap note.

Any suggestions on a design and parts procurement?
Particularly surplus parts.

I don't feel like spending the 1.5K for a commercial switching unit.

Hammond makes a toroidal transformer which with paralleled secondary windings will produce 60 V at 25 Amp. (115Vac Primary).
Any alternatives?

Finding a good filtering capacitor with lots of uF and a good voltage rating
looks expensive. I figure it should have a voltage rating of at least 125V given
that the peak of 60 V rms is 90 V.

Suggestions on regulating circuits? The classic 723 is only good for about 40 V DC.

thanks
bk

2244. Re: AMRAD Active LF Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 02:05:08 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <3C969C51.15C85641@flash.net>
Source record: 45485

Hi Jim,
I believe you can get any back issue article from the ARRL, for a fee,
of course.
You can also get the article from FAR Circuits, when you buy the PCB's
for the antenna project from FAR.

For copying/postage costs, I could also run a copy of the article for
you.
Steve AA7U

Jim Bo wrote:
>
> Where can I get a copy of the September 2001 QST article that
> details an active antenna?
>
> I have searched the web and have not found a site that has the
> constructions details.
>
> Please e-mail with the URL (if there is one) that provides all
> the necessary details to construct this antenna/pre-amp combo.
>
> I will only be able to access e-mail for the next two weeks, the
> news groups are not available for me, so please e-mail me.
>
> Thanks in advance.
>
> Jim
> *

2245. dsp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 02:08:18 UTC
From: stephen zl1any <g_and_s_pearce@xtra.co.nz>
Message-ID: <3c969d08@zfree.co.nz>
Source record: 45486

Hi
Any suggestions for an incircuit programmable dsp
with flash ram to serve as the backend of a digital if receiver?

I plan to use bpf/first mixer/ crystal filter then
ad9870 if processor with second crystal if ... as a sw freq reciever.
the first lo will be pll and have fine freq resolution to get round the 6.25
KHz spacing limitation of the on board synthesiser in the ad9870.

The ad9870 output is a baseband digital bit stream incorporating
i and q data vectors and selectable agc information (to give effectively
higher
dynamic range)

I was looking at the dsPIC30F processors .. particulary
dsPIC30F6012 .. but these will not be available until later this year ...

Has anyone suggestions on an alternative dsp capable processor to processes
the base band bit stream and drive a codec
for audio output

Thanks

Stephen

http://www.zfree.co.nz

2246. PCS64i used for Phasing SSB alignment

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 02:20:34 UTC
From: jehancoc@pacbell.net
Message-ID: <a95870c1.0203181820.53b722eb@posting.google.com>
Source record: 45487

Rick, KK7B of R2/T2 receiver/transmitter fame, gave me a suggestion today about aligning a phasing type SSB transmitter. He suggested down-converting the output of the SSB transmitter by mixing the output with a 10khz signal and using a PC soundcard and spectrum analyzer software to set the phasing balance.

I own one of Velleman's PCS64i PC digital storage scopes and use it for transients, I/R signals, audio spectrum (though Soundforge and a PC card do a better job at audio spectrum). I think I paid $200US for it. I use a 300mhz tektronics most of the time.

Rick's suggestion of mixing the signal prompted me to lower the sample rate of the PCS64i spectrum analyzer from 16mhz (which I use for 7Mhz) to 80khz. At 7mhz, you can only see the carrier and carrier harmonics. The under-sample gave me a nice display of the 7mhz spectrum translated to roughly 45khz on the display. I haven't worked out the math for the translation. The sidebands tend to flop from upper to lower depending on the sample rate selected. I was able to clearly see the audio sidebands and harmonics. The audio offsets by frequency were as close as I can measure. I was using 800/1800 two-tone and single tones from 500-2500 and they were right on. I then tuned the T2 audio phase balance and watched as the opposite sideband was minimized.

This "added feature at no extra charge" made the PCS64i much more valuable. I don't know how accurate the DB and voltage calculations are when under-sampling, but they match as far as I can tell.

As to the T2, I am getting over 40db of carrier suppression and over 30db of opposite sideband with a breadboard, jumpers and all kinds of leakage. I think I can get to 50db of carrier based on eliminating the leakage picked up on ground. I haven't figured out the opposite sideband suppression since that should be greater.

2247. Re: Completely OT : Homebrew a Jet-Pak ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 03:07:02 UTC
From: Marc Passy <mpassy@houston.rr.com>
Message-ID: <qXxl8.24445$VI.1270448@typhoon.austin.rr.com>
Source record: 45489

Several easy steps -

1. Married? Have Kids? Take out a LARGE life insurance policy.

2. Get a lobotomy.

Remainder left as an exercise for the student.

Reticulum wrote:
>
> Howdy,
>
> I know, I know, completely wacky. But I've slavered for one of these
> since the sixties. Saw one demonstrated once live many, many moons ago.
> Has anyone ever built one? Possible ? If anyone has any leads on these
> "blasts from the past" I'd sure appreciate a pointer.
>
> Thx. es 73 de KG4JBM / Andrew
> Reticulum
>
> Remove "your.hat" when replying via e-mail

--
Marc
My Opinions are all my own. Nobody else, especially the
people I work for, wants to claim them.

"At the core of the risk-free society is a self-indulgent failure of
nerve."
Edwin "Buzz" Aldrin, 1999

2248. Your favorite Heathkit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 03:08:20 UTC
From: Gary <gary@heathkits.com>
Message-ID: <EYxl8.322$MC5.34150@newsread2.prod.itd.earthlink.net>
Source record: 45488

Vote for your favorite Heathkit Transmitter at www.heathkits.com look under polls 73 (it's for a research paper)

--

--
Gary K�IMJ 45 years of Heathkit fun http://www.heathkits.com

2249. Re: Alliance U-100 controller schematic?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 05:20:08 UTC
From: Woody <woody.white@att.net>
Message-ID: <3C96854E.8E8A5BC6@att.net>
Source record: 45490

Rob,

I have the complete service manual set for alliance rotators,
including the U-100.
Can scan and send if you like...
Four 8 1/2 x 11 pages devoted to the U100. Would be a medium large
file set for decent resolution, even w/jpg. Let me know if you still
need / want the files...

73, Woody

KC8SSG wrote:
>
> I need a copy of my controller schematic. <SNIP>

--
My website: http://woody.white.home.att.net/
WB4QXE - Homebrew Ham/Electronics Projects &
eclectic Scanning Electron Microscope Images

2250. Re: Looking for Plessey SL630 datasheet...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 05:28:09 UTC
From: Woody <woody.white@att.net>
Message-ID: <3C968730.47F9D453@att.net>
Source record: 45491

Hi Yannick,

I have several pages about the 630 (from Plessey, 2nd edition
Applications Manual)
If you still need let me know. I could scan and send.

73, Woody

-
My website: http://woody.white.home.att.net/
WB4QXE - Homebrew Ham/Electronics Projects &
eclectic Scanning Electron Microscope Images

Yannick wrote:
>
> Hi OMs,
>
> I'm looking for SL630 datasheet.
> Can you help me?
> Many thanks in advance.
>
> de Yannick.....F5IKO

-

2251. Re: Looking for Plessey SL630 datasheet.2.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 05:35:34 UTC
From: Woody <woody.white@att.net>
Message-ID: <3C9688EC.8090828E@att.net>
Source record: 45492

Yannick, Mike:

I built the ssb transceiver (in the app manual) many years ago. It worked very well - and still does. I would be interested in obtaining spare ICs if you know a source.

ICs are metal can (similar to TO-5):
SL612C (3)
SL623C
Sl621C
Sl624C

73, Woody

--
My website: http://woody.white.home.att.net/
WB4QXE - Homebrew Ham/Electronics Projects &
eclectic Scanning Electron Microscope Images

2252. Bandwidth of a receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 07:42:30 UTC
From: David Findlay <david_j_findlay@yahoo.com.au>
Message-ID: <20020319074229.274EC99.NOFFLE@tornado.davsoft.com.au>
Source record: 45493

What governs the bandwidth of a receiver circuit? I'm looking for an FM 138 mhz receiver with a bandwidth of 45khz. Could anyone help me?
Thanks,

David

2253. Re: Bandwidth of a receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 12:10:55 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <u9eamj1et2hc86@corp.supernews.com>
Source record: 45496

> What governs the bandwidth of a receiver circuit? I'm looking for an
FM
> 138 mhz receiver with a bandwidth of 45khz. Could anyone help me?
> Thanks,
>
In general, the bandwidth of the filters in the lowest frequency IF
stage.

2254. Re: Bandwidth of a receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 12:29:54 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c972de1$0$2689@echo-01.iinet.net.au>
Source record: 45347

I take it you want to listen to weather satellite signals.
The bandwidth is generally set by a filter in the IF strip
Generally the 138 MHz signal will be mixed with a LO of (say) 148.7 to give
a 10.7 MHz signal which is amplified by a high gain IF strip with amplitude
limiting so that all signals come out at the same strength. You can get
suitable ceramic or even crystal filters which are inserted in the IF strip.
A detector then extracts audio from the frequency variations of the signal
The audio is processed by a further circuit or computer to give the picture.

Richard

"David Findlay" <david_j_findlay@yahoo.com.au> wrote in message
news:20020319074229.274EC99.NOFFLE@tornado.davsoft.com.au...
> What governs the bandwidth of a receiver circuit? I'm looking for an FM
> 138 mhz receiver with a bandwidth of 45khz. Could anyone help me?
> Thanks,
>
> David

2255. Re: Bandwidth of a receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 12:50:37 UTC
From: David Findlay <david_j_findlay@yahoo.com.au>
Message-ID: <20020319125036.3C513CA8.NOFFLE@tornado.davsoft.com.au>
Source record: 45348

On Tue, 19 Mar 2002 22:29:54 +1000, Richard Hosking wrote:
> I take it you want to listen to weather satellite signals. The

Yep.

> bandwidth is generally set by a filter in the IF strip Generally the
> 138 MHz signal will be mixed with a LO of (say) 148.7 to give a 10.7
> MHz signal which is amplified by a high gain IF strip with amplitude
> limiting so that all signals come out at the same strength. You can
> get suitable ceramic or even crystal filters which are inserted in the
> IF strip. A detector then extracts audio from the frequency variations
> of the signal The audio is processed by a further circuit or computer
> to give the picture.

Okay thanks for the explanation. So I suppose i could take any good quality FM circuit, and chance the filter to the right width? Does it matter if the filter is wider than 45khz and is it possible to get a variable bandwidth filter? Thanks,

David

2256. To VE3AB about SL630 datasheet...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 13:57:29 UTC
From: mail@f5iko.com
Message-ID: <99e2cce8.0203190557.3210eab@posting.google.com>
Source record: 45349

Hi Earl,

Each time i try to send you an e-mail, it fails:

Remote host said: 550 5.7.1 Relaying denied

73' de F5IKO

2257. Re: Bandwidth of a receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 14:28:54 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <3C974B26.581CD3FA@dialpoint.net>
Source record: 45350

As you probably do not have too many signals to seperate you can
probably use a wider filter. One modification that has been made on
some of the scanners is to take out the narrow 455 khz filter and put a
capacitor of about .01 uf in its place.
Finding filters for other than the FM broacast band which I think are
around 200 khz or wider than 15 khz may be difficult. YOu may want to
look at www.hamtronics.com for a receiver .

David Findlay wrote:
>
> On Tue, 19 Mar 2002 22:29:54 +1000, Richard Hosking wrote:
> > I take it you want to listen to weather satellite signals. The
>
>
>
> Okay thanks for the explanation. So I suppose i could take any good
> quality FM circuit, and chance the filter to the right width? Does it
> matter if the filter is wider than 45khz and is it possible to get a
> variable bandwidth filter? Thanks,
>
> David

2258. Re: In need of a PCB Manufacturer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 16:15:43 UTC
From: Brian Collett <bcollett@hamilton.edu>
Message-ID: <bcollett-07C7E3.11154319032002@news.hamilton.edu>
Source record: 45351

In article <3C963D28.2506@atlantic.net>,
Steve <steve34613@atlantic.net> wrote:

> I'm in need of the name and address of a small company that can make
> small
> inexpensive printed circuit boards for private individuals.

I have had excellent result from www.expresspcb.com. They can do small
fast orders extremely reasonably. THey even provide free PCB design
software.
Brian.

2259. Re: MMIC questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 17:39:37 UTC
From: la8ak.xnd@online.no
Message-ID: <3c969922.28705437@news.online.no>
Source record: 45352

On Tue, 19 Mar 2002 01:17:05 GMT, John Miles
<jmiles@pop.removethistomailme.net> wrote:

>RaOuL wrote:
>>
>> Hello All!
>> I was at a job interview today for a microwave technician job and the
>> subject of MMIC was brought up. I sheepishly admitted that I know nothing
>> about MMIC and politely changed the subject. Overall I believe that the
>> interview went well and that I'll likely be working with MMIC in some
>> capacity in the near future. That brings me to my questions:
>> I know nothing about MMIC - is there a primer online somewhere? A quick
>> search of Google didn't turn up much useful info for the newbie or casual
>> experimenter. Are there any MMIC development kits available for the casual
>> experimenter at a reasonable price?
>> Thanks in advance for any information...
>>
>> 73,
>> Russ - KB1GKN
>
>MMICs=Monolithic Microwave Integrated Circuits. Generally seems to be
>used to refer to ICs that combine RF amps with broadband Z-matching
>components required to interface them to 50 ohms. When you use a MMIC
>in a 50-ohm system, you generally don't have to worry about designing
>your own matching networks. But you also won't get the bleeding-edge
>power consumption and noise-figure specs with MMICs that are possible
>with discretes, since the low-level aspects of the circuit design are no
>longer in your hands.
>
the only problem I am aware of is poor isolation between output and
input, so if output termination is poor this reflects to the input.
Therefore is not recommended to terminate a mixer (and feeding an xtal
filter), then an extra transistor output stage is needed, but the
modification is rather simple, and the transistor may be connected to
use same current as the amplifier.

Jan-Martin
LA8AK
--
remove ,xnd to reply

2260. Signal Corps BC-603 info needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 18:41:54 UTC
From: KC8SSG <kc8ssg@qsl.net>
Message-ID: <SDLI8.446$AK4.6743@news>
Source record: 45355
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.shortwave,rec.radio.swap

I just came into this receiver and was wanting to know more about it.Anybody know anything?

--
KC8SSG

2261. Re: BC100XLT repair

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 18:42:54 UTC
From: PDMoney <ballgofar@ROMOVETHIS_retardsrule.com>
Message-ID: <OELI8.13763$bj1.5853725@news02.optonline.net>
Source record: 45354

I have the Schematics Now if anyone is interested. Email me at
ballgofar@retardsrule.com

"paul" <ballgofar@retardsrule.com> wrote in message
news:302f180.0203171951.5b8de32c@posting.google.com...
> Can you tell me how to find this Q201 everyone seems to be talking
> about?
> I have a BC100XLT that has all the symptoms of this seemingly coomon
> problem yet I dont know how to locate it on the board. Any help would
> be greatly apprciated. Someone HAS to have done this repair?! PLEASE
> HELP if at all possible.
>
> Thanks,
>
> Paul
>
> Uniden/Bearcat BC200XLT Portable - Loss of Audio and Dial Lamp
> If you can program frequencies into your BC200XLT but there is no
> audio and
> the green backlight no longer functions, a tiny transistor may have
> failed.
> Check for a defective PNP surface mount transistor, Q201
> (2SB815B6-YDY).
> Q201 is used as a switch to furnish 8 VDC to several stages of the
> BC200XLT.
> Its main purpose is to switch off power hungry stages of the BC200XLT
> when
> the CPU thinks the NiCd voltage has fallen below a threshhold. That's
> an
> attempt to limit the current drain on weak NiCds to avoid permanent
> damage.
>
> Q201 is located on the foil side of the "Micom" board, adjacent to the
> black
> multi-pin connector which mates the Micom and main boards together.
>
> Q201 can be destroyed by a few different causes, primarily, by
> something in
> the scanner drawing too much current through it. In one case,
> capacitor C36
> shorted. It's a 220 uF 10v electrolytic, located on the component side
> of
> the main board, connected from pin 8 of the audio IC (IC2 NJM386SL) to
> ground. Capacitor C55 shorted in another BC200XLT. Gary Bean reports

> he
> substituted a 2SA1298 for Q201 and it worked fine. In a pinch you
> bypass
> Q201 by soldering a short piece of bare wire between the collector and
> emitter, but you must first fix the component which caused Q201 to
> fail

2262. Low Output Impedance DC Amplifier Chip

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 18:51:15 UTC
From: martin@okstate.edu
Message-ID: <a781b3$i4p$1@hydrogen.cis.okstate.edu>
Source record: 45353

Someone gave me a circuit description that splits a
single-ended DC supply in to two half-voltage supplies for
running differential op-amps. The circuit used a LM381 low-noise
amplifier biased in such a way as to produce an output exactly
halfway between Vcc and ground.

The only problem is that the LM381 is no longer made.
The exact same circuit should, however, work on any DC amplifier
chip that has a low noise output figure and, this is the
important part, has a very low impedance. The output of the
amplifier is the fake signal ground for one's op-amp circuitry so
the duel-ended supply voltages are gotten between the output pin
of the voltage amp and each end of the DC supply.

Are there any amplifiers that might handle 20 to 30 volts
and dissipate a watt or two?

That much dissipation would probably not be needed, but a
margin of safety never heart anybody.

The other alternative is to take something like a 741 set
to unity gain, bias its + input from a pair of equal resistors
across the DC supply and feed the output of the 741 to a
PNP/NPN transistor pair whose emitters are the new 0 point.

A chip with low enough impedance would negate the need
for the external output pair.

--

Martin McCormick WB5AGZ Stillwater, OK
OSU Center for Computing and Information Services Network Operations Group

2263. Modifying Speaker/Mic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 19:58:09 UTC
From: Josh Koffman <listsjosh@3mtmp.com>
Message-ID: <3C979851.7241595B@3mtmp.com>
Source record: 45356
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hi all. I think I might be able to figure this out on my own, but I'd like to avoid reinventing the wheel if possible. I can't seem to find anything by searching on the web, so I'll ask here.

I want to get a speaker/mic made for ICOM/Maxon type handhelds to work with a Motorola commercial handheld. The Motorola is an LTS2000 and has the same speaker/mic as the GP300 series. Basically the speaker is always connected, and the PTT is just a switch in series with the microphone. The radio senses when you close the switch, and then goes into transmit. Any ideas? I'd like to build a seperate box to do the conversion, that way the speaker mic will work on both units.

Any and all help or pointers for info will really be appreciated. If possibly, can you also cc a copy of your reply to joshy@3mtmp.com? My newsgroup access is really bad.

Thanks in advance!

Josh
joshy@3mtmp.com
--
A common mistake that people make when trying to design something completely foolproof is to underestimate the ingenuity of complete fools.
-Douglas Adams

2264. Re: Signal Corps BC-603 info needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 20:15:22 UTC
From: Gray Shockley <gray@compcomm.com>
Message-ID: <01HW.B8BCF81700279D9311241730@news-central.giganews.com>
Source record: 45357
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.shortwave,rec.radio.swap

On Tue, 19 Mar 2002 12:41:54 -0600, KC8SSG wrote
(in message <SDLl8.446$AK4.6743@news>):

> I just came into this receiver and was wanting to know more about it.Anybody
> know anything?
>
> --
> KC8SSG

BC = Basic Component
FM Receiver (Voice Only)
20-28MHz
Part of SCR-508, SCR-528, SCR-538
IF 2.65MHz
continuous thumb wheel tuning plus 10 presets
built-in speaker
10 tubes
12-24 volts (dc)
Built by Panoramic Radio Corp in 1943
used in M-24 Main tank, M26 Pershing (Heavy/Medium) tank

Surplas, Part I, magazine article, by Kenneth Grayson, CQ, Sep.58 Surplus,
Part II,
" ", CQ, Oct.58
Surplus, Conversion to 30-50mc, magazine article, by Kenneth Grayson, CQ,
Dec.59
see Surplus Conversion Handbook, by Tom Kneitel, CQ Technical Series,
Cowan Publishing Group, 1964

Military School Manual $5 from:
<http://www.w7fg.com/cgibin/cat.cgi?find=M>

Pretty good scanned (from TM?) pic at:
<http://hereford.ampr.org/millist/pic/bc-603.jpg>

All of this from multiple sources

Gray Shockley

DX-392 w/internal whip
& Select-A-Tenna
DX-398 w/70' Long Wire

& 16" Torus Tuner

2265. Re: NBFM audio demodulation at high IFs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-19 22:29:06 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0203191429.52cc49f2@posting.google.com>
Source record: 45358
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3C969421.350E@pop.removethistomailme.net>...
> Tom Bruhns wrote:
> >
> > And of course, a Q of 1000 is fairly low for a crystal. You might try
> > a crystal with damping. Consider that the series resonance is
> > normally pretty close to the parallel resonance, but if you use a
> > crystal whose series resonance is below the band of interest and load
> > it lightly enough with capacitance, you should be able to get the
> > parallel resonance where you want, and you can add series or shunt
> > resistance to adjust the Q.
> >
> > You could also characterize one of your 21.4MHz filters as a one-port
> > to see if you get the phase response and impedance you need...if you
> > do, go for it. You might find that loading the "other" port with some
> > impedance helps. I don't know; I'm just guessing at things to try.
> >
> > Cheers,
> > Tom
> >
>
> Thanks to all for the suggestions... I did have a look at the phase
> response of the filters, and it seemed pretty twitchy at first glance.
> It's clear that some matching work would have to be done to make them
> happy, and even then I'd probably be second-guessing the quality of the
> recovered audio from now on.
>
> I decided to add a third conversion to the receiver to get down to 455
> kHz, where the SA604's boilerplate app note circuit will suffice.
>
>
One thing worth keeping in mind is that since you seem to have good
filters at the 21.4MHz IF, you don't need anything beyond a filter
to remove the unwanted outputs of the third mixer. That loosens
things up, because you could convert to any frequency low enough
for good discriminator operation. Significantly, you can then
get away with using a crystal that would be commonly available,
rather than having a crystal ground to take 21.4MHz to 455KHz.

A small thing, but I have a bunch of odd-ball frequency filters
that aren't such a bargain if I have to spend money on a custom
crystal to convert to another IF.

Michael VE2BVW

2266. Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-20 00:01:15 UTC
From: Melissa in Colorado <melissa@NODARNSPAMupalliance.org>
Message-ID: <Xns91D6AD2BA239melissaNN0DARNSPAMup@206.124.0.13>
Source record: 45368
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

Has anyone seen any old unbuilt Heathkit SB102 transcievers around for sale?
Not sure if any even still exist in unbuilt form.

--
- Melissa
Somewhere in Colorado

2267. Re: NBFM audio demodulation at high IFs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-20 01:09:06 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3C97E0B2.3C73@pop.removethistomailme.net>
Source record: 45359
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Michael Black wrote:
>
> A small thing, but I have a bunch of odd-ball frequency filters
> that aren't such a bargain if I have to spend money on a custom
> crystal to convert to another IF.
>

I'm pretty lucky in this case because both my 1st and 2nd LOs and my BFO are fully synthesized, allowing me to put the IFs anywhere I want. I was initially hoping to avoid a third conversion, but that turned out to be more trouble than it would have been worth, for SSB as well as NBFM.

The overall conversion scheme is looking like 904 MHz 1st IF; 10.7 MHz 2nd (and final) IF for WBFM; and 32 MHz 2nd IF followed by a 455-kHz 3rd IF for NBFM, AM, and SSB.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2268. Re: Low Output Impedance DC Amplifier Chip

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-20 01:31:32 UTC
From: k7itm@aol.com
Message-ID: <3200347.0203191731.710f8048@posting.google.com>
Source record: 45360

Now wait a minute here! The LM381 is a dual audio PREamp, not a power amplifier. It has an open-loop output impedance of 150 ohms or so, and you can find plenty of op amps that will beat that. You can also find plenty of op amps that have low input-referred noise. The LM381 is around 5nV/rtHz, it appears, and you should be able to do about as well with a 5532/5534 op amp, which ought to be pretty cheap. You can get to lower noise in many other parts, though they get a bit more pricy. (I have a bunch of LT1124's I scrapped out of some boards that look like they'd be quite good in this application, for example. Low noise, will handle the voltage, can sink or source 20mA, high gain, reasonable bandwidth. Only other thing that would be nice to have is the ability to directly drive large capacitors with unity gain feedback connected.)

Do you think you really NEED that sort of power dissipation?? From the schematic in the data sheet, it looks like the LM381 is current-limited at around 12mA sourced, and at 15V drop, that's only 180mW. You can do better than that in a lot of modern op amps, both in power dissipation and output current limit. If you need power, it's likely because you want a reference to return a low-impedance load to, and in that case, you might do better with a bridged dual power amplifier.

Just AVOID the LM324/LM358 type op amps for this application. Speaking from bitter experience, they have a severe problem if you ask their output current to change polarity, since the output stage is (nearly) class-C. (They can work OK, though not terribly low noise, if you provide a resistor to bias their output current to be unipolar.)

Also, it's not a bad idea to design your circuits so they don't need that node to be super-low impedance, and to decouple things from possible high frequency crosstalk among the various things tied to that node.

Cheers,
Tom

martin@okstate.edu (Debian UserMartin McCormick) wrote in message news:<a781b3$i4p$1@hydrogen.cis.okstate.edu>...
> Someone gave me a circuit description that splits a
> single-ended DC supply in to two half-voltage supplies for
> running differential op-amps. The circuit used a LM381 low-noise
> amplifier biased in such a way as to produce an output exactly
> halfway between Vcc and ground.
>

> The only problem is that the LM381 is no longer made.
> The exact same circuit should, however, work on any DC amplifier
> chip that has a low noise output figure and, this is the
> important part, has a very low impedance. The output of the
> amplifier is the fake signal ground for one's op-amp circuitry so
> the duel-ended supply voltages are gotten between the output pin
> of the voltage amp and each end of the DC supply.
>
> Are there any amplifiers that might handle 20 to 30 volts
> and dissipate a watt or two?
>
> That much dissipation would probably not be needed, but a
> margin of safety never heart anybody.
>
> The other alternative is to take something like a 741 set
> to unity gain, bias its + input from a pair of equal resistors
> across the DC supply and feed the output of the 741 to a
> PNP/NPN transistor pair whose emitters are the new 0 point.
>
> A chip with low enough impedance would negate the need
> for the external output pair.

2269. Re: Parts/Design for 50V, 25 Amp DC Pwr Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-20 02:03:17 UTC
From: k7itm@aol.com
Message-ID: <3200347.0203191803.6295ab95@posting.google.com>
Source record: 45361

I'll offer some random thoughts on what's a pretty open-ended topic...

Unless you use a choke-input filter, 60V RMS will give you lots of
voltage to drop to get down to 50VDC output!

I'd highly recommend using switching techniques somewhere along the
line...if not straight off the line, at least in regulating the DC out
of the mains-frequency supply. Otherwise, be prepared to dissipate a
lot of power in your regulator. I'd actually avoid trying to use too
large a filter cap; it will increase the RMS current in the
transformer secondary with very little increase in output voltage.
Best use of the power transformer, though, is with a choke-input
filter. You'd also get pretty decent regulation straight out of the
filter if you used, say, a 10mH choke and kept the current to at least
about five amps.

I'd personally do an off-line switcher. Note that per unit of energy
storage, caps rated appropriately for off-line rectification are
considerably cheaper than ones appropriate for 60V rectification. The
power transformer is vastly smaller and lighter at 100kHz than at
60Hz. You can turn the supply off during receive to avoid the hash.
The power mosfets to drive the transformer aren't terribly expensive
(~10A, 400V parts), and modern control ICs give you good design info
and current-mode control that inherently limits current. There are,
of course, a lot more pitfalls than with a heavy-iron solution, but if
you can get the amplifier working right, I'd think you can get a
switching supply working too.

Cheers,
Tom

Bill Kirkland <kirklandb@sympatico.ca> wrote in message
news:<3C969568.2927A167@sympatico.ca>...
> I am looking to build a 50 V 25 Amp DC supply for a 600 Watt Quad Fet
> Amp -
> basically the one in the Motorola Ap note.
>
> Any suggestions on a design and parts procurement?
> Particularly surplus parts.
>
> I don't feel like spending the 1.5K for a commercial switching unit.
>
> Hammond makes a toroidal transformer which with paralleled secondary
> windings will produce 60 V at 25 Amp. (115Vac Primary).
> Any alternatives?
>

> Finding a good filtering capacitor with lots of uF and a good voltage
> rating
> looks expensive. I figure it should have a voltage rating of at least
> 125V given
> that the peak of 60 V rms is 90 V.
>
> Suggestions on regulating circuits? The classic 723 is only good for
> about 40 V DC.
>
> thanks
> bk

2270. Re: Completely OT : Homebrew a Jet-Pak ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-20 03:43:18 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0203191943.20816297@posting.google.com>
Source record: 45362

F. Feeney <fkf1@cornell.edu> wrote in message
news:<a60pd5$e87$1@news01.cit.cornell.edu>...

>
> Where did you see one fly? I know they used to do them at football games
> and such, flying the length of the field. I remember seeing films of
> that, and of someone flying over a 10 story building. He said that was a
> bit tricky as you had to have enough fuel left to stop coming back down
> and it was easy to miscalculate.

I think they flew one around in the astrodome one time. I think I've
seen the video to it . Was years ago. MK

2271. rudolf hell (hellschreiber inventor)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-20 04:26:15 UTC
From: Monty Brandenberg <mcbinc@ne.mediaone.net>
Message-ID: <3C981017.B1657487@ne.mediaone.net>
Source record: 45364

From Thursday, March 14, 2002:

BERLIN (AP) -- Rudolf Hell, a German inventor who pioneered technology that led to the fax and the color scanner, has died, officials said Thursday. He was 100.

The announcement came from the northern German city of Kiel, where Hell rebuilt his business in the 1940s after his factory in Berlin was destroyed during World War II. No cause of death was announced.

Hell's landmark invention was a machine for transmitting text that electronically broke up letters into a stream of dots reassembled at the receiving end, in effect the first telefax.

The commercial success of his 1929 "Hell Recorder" allowed him to found his own company.

The technology was less prone to poor reception than telex transmissions, making Hell's machines popular for news agencies, the post office and police departments. In the 1920s, he also invented an image scanning tube for televisions and a radio-beam flightpath finder that is considered a forerunner of aircraft autopilots.

During World War II in Nazi Germany, Hell worked on encoding machines. After the wartime destruction, he resumed business in 1947 and came up with inventions that revolutionized the graphic arts.

An electronically controlled engraver unveiled in 1954 made photo publishing easier for newspapers, and an early version of the color scanner followed in 1963. Hell also was a pioneer of electronic digital typesetting in the 1960s, which ushered out the traditional method using lead.

Hell sold his Kiel-based company in 1981 to German industrial giant Siemens. It was later merged with Linotype AG to become Linotype-Hell AG, which in turn was taken over by German printing press maker Heidelberger Druckmaschinen in 1996. Hell retreated from his business over the past decade.

Born Dec. 19, 1901 in the Bavarian town of Eggmuehl, Hell excelled in physics and math in school. He held a doctorate in electronic engineering, a then-fledgling field he studied in Munich in the 1920s. The West German government awarded him its highest honor, the Grand Cross of Merit for Distinguished Service.

There was no information on survivors or funeral arrangements.

--
Monty Brandenberg, Software Consultant MCB, Inc.
mcbinc@world.std.com P.O. Box 426188
mcbinc@ne.mediaone.net Cambridge, MA 02142-0021
617.864.6907

2272. FS NEC Transistors 2SC2494MA 10 ea NEW

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-20 06:23:12 UTC
From: n6ax@arrl.net
Message-ID: <cd5f86bb.0203192223.5b6469f6@posting.google.com>
Source record: 45363
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

New transistors, 10 each, matched set.

Alternate part number is NE050297-07.

These transistors are NEW!

RF parts wants about $27.00 each.

You can have all ten for $175.00 plus shipping.

2273. Re: MMIC questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-20 09:05:58 UTC
From: poissondanlo@aol.com
Message-ID: <20020320040558.23248.00002574@mb-fq.aol.com>
Source record: 45365

hello
look here :
http://f6csx.free.fr/
it is a french web site but there are data sheets in english
Serge/F5JTM

2274. Re: dsp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-20 09:44:38 UTC
From: Huub Ellenbroek <pa3edo@hotmail.com>
Message-ID: <a77203ptn1@reader05.wxs.nl>
Source record: 45495

"stephen zl1any" <g_and_s_pearce@xtra.co.nz> wrote in message
news:3c969d08@zfree.co.nz...
>
> Hi
> Any suggestions for an incircuit programmable dsp
> with flash ram to serve as the backend of a digital if receiver?
>
>
> I was looking at the dsPIC30F processors .. particulary
> dsPIC30F6012 .. but these will not be available until later this year ...
>
> Has anyone suggestions on an alternative dsp capable processor to
processes
> the base band bit stream and drive a codec
> for audio output
>
>
> Thanks
>
> Stephen
>
>
>
> http://www.zfree.co.nz
>

I'm working on something similair here and am using a TMS320VC32.
It is not incircuit programmable but incorporates a boot loader so booting
it from an external FLASH isn't too difficult. There's no problem ordering
them in single quantities (in the netherlands) and the're quite cheap.
Furthermore, there's a lot of software available.

73
Huub, PA3EDO

2275. Re: You have got to build it to believe it!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-20 15:17:36 UTC
From: leonard bailey <lb5565_33@hotmail.com>
Message-ID: <kK1m8.98866$991.22832968@typhoon.kc.rr.com>
Source record: 45366

tell me how to get to your site
"Patrick" <braincambre500@yahoo.com> wrote in message
news:85a87c6c.0203142359.47ea8db4@posting.google.com...
> Hello all,
>
> I like to come to forums where the interest is in radio. I have just made
my
> first website and have all the information one needs in order to make
> a truly remarkable circuit. I call it the "Radio Shack Special".
>
> It is really a super-regenerative receiver that I had doctored up so
> much (by taken off component after component) that all if left is 12
> components in the receiver itself. The sensitivity, selectivitiy and
> great audio output is truly an understatement.
>
> You have to go to the site and see for yourself. I have laid down ALL
> the criteria for one to get it up and running.
>
> I quess it is these simple projects that just become so fascinating.
>
> Usually, with FM, all sorts of detectors, discrimators..etc. you need to
> have.
>
> This little gem is shining so bright...I listen to it every night before
> I go to bed....just for the fact that it is picking up FM.....and
sensitivity!
>
> Pedro was the first person to try it.....he started the journey...and
> now has finished it and added fine touches to the outer jacket as to make
> it look so professional...
>
> If you are interested in this.....you need to go to my website and
> take a look at the amazing "Radio Shack Special". I call it that because
> all of the components may be purchased there....except for the tuning
> capacitor.
>
> ...I do want to thank each and every one for the time
> given.
>
> ...your friend, Patrick

2276. Phasing SSB exciter - audio second harmonic problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-20 16:10:04 UTC
From: jehancoc@pacbell.net
Message-ID: <a95870c1.0203200810.426f3d7e@posting.google.com>
Source record: 45367

I built a KK7B phasing exciter. I tried the original and updated audio phase shift circuit but used a twisted-wie quadrature LO phase splitter. Both circuits performed well with carrier down a little over 50db and opposite sideband down about 40db with a breadboarded ground system.

I then swapped out the entire audio phase shift network with a motorola 56309evm dsp running the audio filters and hilbert transform. The signal is very much improved in the desired sideband and the opposite sideband is now down 45db or so. Carrier suppression stayed the same. The two-tone test displayed very little audio harmonic content in the desired sideband opposed to the other two audio phase shifters where the odd harmonics were detectable.

I can tune the opposite sideband so that the fundamentals in the two-tone (and single tone) are reduced over 50db, most likely 55db. The problem is that when the opposite sideband is balanced out, the fundamentals drop but at a point, the second harmonic of the fundamental audio starts to rise and limits my overall opposite sideband suppression.

What is causing the second harmonic in the opposite sideband to be so prominent?

I haven't had time to explore this mathematically. Can it be reduced?

The second harmonic problem is the same with either single or two-tone drive. I am not overmodulating the carrier.

Thanks.

2277. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-20 16:58:50 UTC
From: Patch <bob_acord@msn.com>
Message-ID: <ed3m8.71967$q83.14576660@twister.rdc-kc.rr.com>
Source record: 45369
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

There are collectors out there that hoard this stuff still new in the box. They wouldn't dream of building one. I always thought the fun of Heathkit was in the building. Do a search on Ebay for Heathkit. You can find a lot of it there.

"Melissa in Colorado" <melissa@NODARNSPAMupalliance.org> wrote in message news:Xns91D6AD2BA239melissaNN0DARNSPAMup@206.124.0.13...
> Has anyone seen any old unbuilt Heathkit SB102 transcievers around for sale?
> Not sure if any even still exist in unbuilt form.
>
> --
> - Melissa
> Somewhere in Colorado

2278. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-20 19:20:55 UTC
From: Melissa in Colorado <melissa@NODARRNNSPAMupalliance.org>
Message-ID: <Xns91D77DA3BF41BmelissaNN0DARNSPAMup@206.124.0.13>
Source record: 45381
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

"Patch" <bob_acord@msn.com> bestowed such eternal wisdom upon us by
saying from news:ed3m8.71967$q83.14576660@twister.rdc-kc.rr.com:

> There are collectors out there that hoard this stuff still new in the
> box. They wouldn't dream of building one. I always thought the fun of
> Heathkit was in the building. Do a search on Ebay for Heathkit. You can
> find a lot of it there.

I did but didn't find a new unbuilt SB102. I'd like to build one now because
I was NASA certified in soldering in 1990 and it would be cool to build one
and get on the wir with it. I'm KW0WW BTW.

--
- Melissa
Somewhere in Colorado

2279. Re: Low Output Impedance DC Amplifier Chip

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-20 20:00:00 UTC
From: martin@okstate.edu
Message-ID: <a7apo0iie1@hydrogen.cis.okstate.edu>
Source record: 45370

Many thanks for all the information. Since I posted that
message, I have found out about a little chip that Texas
Instruments makes called the TLE2426

http://www-s.ti.com/sc/ds/tle2426.pdf

It is called a rail splitter virtual ground device and it
divides a single-ended supply exactly in half and gives you a
source or sink of 20ma. They make several suffixes for different
operating temperature ranges and package designs, but the device
which Digikey carries sounds like what I needed all along.

It is good from 4 to 40 volts and one of the packages is
a 8-pin DIP that brings a decoupling pin out to allow for a
capacitor to ground to reduce the output noise.

Again, thanks for the pointers, etc.
In article <3200347.0203191731.710f8048@posting.google.com>,
Tom Bruhns <k7itm@aol.com> wrote:
>Now wait a minute here! The LM381 is a dual audio PREamp, not a power
>amplifier. It has an open-loop output impedance of 150 ohms or so,
>and you can find plenty of op amps that will beat that. You can also
--

Martin McCormick WB5AGZ Stillwater, OK
OSU Center for Computing and Information Services Network Operations Group

2280. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-20 21:07:22 UTC
From: Ken Gunton <spam@ohiomicrowave.com>
Message-ID: <biuh9uk7fdco9fr4fko6iv7v1bki25sgsb@4ax.com>
Source record: 45371
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

On 19 Mar 2002 17:01:15 -0700, Melissa in Colorado
<melissa@NODARNSPAMupalliance.org> wrote:

>Has anyone seen any old unbuilt Heathkit SB102 transcievers around for sale?
>Not sure if any even still exist in unbuilt form.

I built mine in 1969 and still use it. Original 6146's, too! That
will change at this year's Dayton Hamvention, though, now that the XYL
has given permission to buy a "state of the art" rig. I've never been
on the WARC bands, and people tell me I need to....

COME TO DAYTON ! ! ! ! !

Ken Gunton WB6QWF ken at ohiomicrowave dott comm
Ohio Microwave
Microwave and RF Components to 110 GHz
http://www.ohiomicrowave.com

2281. Help in desiging Xtal Ladder Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-20 21:14:40 UTC
From: w.harbour@worldnet.att.net
Message-ID: <8737521.0203201314.2b844881@posting.google.com>
Source record: 45372

I want to design a 3 pole xtal filter (IF 2.457Mhz) for a QRP simple superhet I'm building. The xtals are ECS HC-49/U Microprocessor 2.4576 MHZ 32pH. I just want to be in the ballpark for an ok IF filter so I don't want to spend a lot of time analyzing the filters etc. Anyone have an idea of what value caps to use and what the input/output impedance may be?? Just get me in the ballpark and I'll be happy.

Thanks,

Bill
KD4PWB

2282. WTB

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-20 21:18:46 UTC
From: Paul Cooper <plcooper@starband.net>
Message-ID: <3C98FCD8.4010106@starband.net>
Source record: 45373

WTB 10 Megohm multiplier resistor for plate voltage meter. Need around
30 watts; can be multiple resistors on card or board.

Also need 5 Megohms.

Paul, K6PY

plcooper@starband.net

2283. Pulling HC-49 Crystal in Super VXO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-21 00:06:37 UTC
From: w.harbourjr@worldnet.att.net
Message-ID: <deafe3d9.0203201606.ab74abe@posting.google.com>
Source record: 45374

Has anyone had any experience with how far you can pull the HC-49U
xtal in the Super VXO?? Especially those xtals clost to 40m.

Tnx,

Bill
KD4PWB

2284. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-21 00:06:45 UTC
From: Melissa in Colorado <melissa@NODARNSPAMupalliance.org>
Message-ID: <Xns91D7AE19C53C1melissaNN0DARNSPAMup@206.124.0.13>
Source record: 45380
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

Ken Gunton <spam@ohiomicrowave.com> bestowed such eternal wisdom upon us
by saying from news:biuh9uk7fdco9fr4fko6iv7v1bki25sgsb@4ax.com:

>
>
> On 19 Mar 2002 17:01:15 -0700, Melissa in Colorado
><melissa@NODARNSPAMupalliance.org> wrote:
>
>>Has anyone seen any old unbuilt Heathkit SB102 transcievers around for
>>sale? Not sure if any even still exist in unbuilt form.
>
> I built mine in 1969 and still use it. Original 6146's, too! That
> will change at this year's Dayton Hamvention, though, now that the XYL
> has given permission to buy a "state of the art" rig. I've never been
> on the WARC bands, and people tell me I need to....

That sounds sweet, but I haven't even been on the air since about 1995, yet
alone HF.

Is it true, what I hear, that amateur radio has been dying out lately, due
to cell phones of all things? You can't exactly have QSO's with people all
over the world, using cell phones.

--
- Melissa
KW0WW
Somewhere in Colorado

2285. Re: Help in desiging Xtal Ladder Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-21 00:54:47 UTC
From: Bill Kirkland <kirklandb@sympatico.ca>
Message-ID: <3C992F57.753C8481@sympatico.ca>
Source record: 45375

Check out the article in QRP Classics, from July 87 QST
Designing and Building Simple Crystal Filters
some notes
larger C values yield narrower BW and higher insertion loss
vary the end terminations to obtain a shape that is free of passband
ripple.

The ARRL handbook may still have a circuit for sweeping crystal filters.

bk

Bill Harbour wrote:

> I want to design a 3 pole xtal filter (IF 2.457Mhz) for a QRP simple
> superhet I'm building. The xtals are ECS HC-49/U Microprocessor
> 2.4576 MHZ 32pH. I just want to be in the ballpark for an ok IF
> filter so I don't want to spend a lot of time analyzing the filters
> etc. Anyone have an idea of what value caps to use and what the
> input/output impedance may be?? Just get me in the ballpark and I'll
> be happy.
>
> Thanks,
>
> Bill
> KD4PWB

2286. Latest Junkbox Parts for Sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-21 03:13:06 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <r5cm8.721$Mx3.154482@news1.iquest.net>
Source record: 45376
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.misc

```
Junkbox Surplus Parts for Sale as of 03/20/01
=============================================
NEW stuff!!

LM78L62ACZ Volt regulators, TO92 format 5/$3.00 10/$5.00
6.2 Vdc

SMT2222's - Surf Mount 2N2222 NPN's - 200/$5
SMT4403's - Surf Mount 2N4403 PNP's - 200/$5

470pf 5% surf mount caps - 200/$5
1000pf 20% surf mount caps - 200/$5

9.8304 Mhz Crystals, 1/4 in tall - I have 500 - make me an offer.

27mH inductors with radial leads - I have 1000 - make me an offer.

2SC2078 Power Amps - 5/$15

================================================

Caps
====
NEW .1 uF Poly/Film caps - 10% 250v, new stock, paper tape, nice
long leads. These are not NPO and are made by S&M Components
50/$3.00 or 100/$5.00

NOS .01 uF ceramic caps, 10% 100v brand new by Kyocera
50/$3 or 100/$5

NOS 1000pf blue mono caps, 10% 100v
50/$3 or 100/$5

NOS 470pf ceramics on paper tape, rated 5% (NPO)
50/$3 or 100/$5

NOS 12pf NPO ceramics on tape
50/$4 or 100/$7

Voltage Regulators
==================
L7805ACV voltage regulators TO220 case. 5 for $4.00
L7806CV voltage regulators. TO220 case. 5 for $4.00
LM7812T voltage regulators. TO220 case. 5 for $4.00

LM317T Adjust. Positive Voltage Regulator TO220. 6 for $5.00
```

Key/Headphone Jacks
==========
These are 3.5mm female stereo PCB mount jacks. Can be used in
ugly/manhattan building projects with no problems.
3/$1.35 (or send a buck and a stamp)

Transistors
==========
TP2222 plastic TO92 NPN - NEW PARTS (House brand 2N2222)100/7.50
50/4.00
2N3906's plastic TO92. PNP - 50/4.00 NEW PARTS
2N3704's plastic TO92, NPN - 50/4.00 NEW PARTS
2N7000 MOSFET - 5/$2

IRF540's TMOS Power FET, N-Channel, 27A, 100v RDS(on) = .070 Ohms
http://www.onsemi.com/pub/Collateral/IRF540-D.PDF
for data sheet - $1.00 each.

BC847B - Surface Mount NPN's, general purpose
CBO = 50v, CEO = 45v, EBO = 6v, Collector Current Max = 100 mA,
electrical characteristic curves for this unit are the same as the
PN2222A, SST222A, MMST2222A, and UMT222A transistor. These are new
stock, on SM tape.
100pcs/$3.00 200pc/$5.00

Op AMPS, Comparators
==========
LM741CN - Single Op Amp, 8 Pin Dip, 4 for $2.00
http://www.hep.ph.ic.ac.uk/~hallg/Instrumentation/Data/LM741.pdf

BA4558 - Dual Op Amp, 8 Pin Dip, 4 for $2.00
http://www.rohm.com/products/databook/standard/pdf/ba4558.pdf

BA10324 - Quad Ground Sense Op Amp 14 pin, 4 for $2.00
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10358 - Dual Ground Sense Op Amp, 8 pin, 4 for $2.00
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10393 - Dual Comparator 8 pin dip, 4 for $2.00
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10339 - Quad Comparator 14 pin, 4 for $2.00
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA4560 - Dual High Slew Op Amp, 4 for $2.00
http://www.rohm.com/products/databook/standard/pdf/ba4560.pdf

Diodes
======
1N4148 - You always need these. 75 for $2.00 These are NEW.

Let me know if you're interested. All prices are post paid to the
USA, unless otherwise noted. I will ship to non USA addresses but we
need to discuss the shipping charges first.

2287. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-21 04:02:31 UTC
From: Tracy <n1rkt@blomand.net>
Message-ID: <a7bm7c$3h5u$1@news3.infoave.net>
Source record: 45378
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

Hi Ken,

Give you $20 bucks for that and you can have the new stuff, I'll stick to
the old!

Good Luck!

Ken Gunton <spam@ohiomicrowave.com> wrote in message
news:biuh9uk7fdco9fr4fko6iv7v1bki25sgsb@4ax.com...
>
>
> On 19 Mar 2002 17:01:15 -0700, Melissa in Colorado
> <melissa@NODARNSPAMupalliance.org> wrote:
>
> >Has anyone seen any old unbuilt Heathkit SB102 transcievers around for
sale?
> >Not sure if any even still exist in unbuilt form.
>
> I built mine in 1969 and still use it. Original 6146's, too! That
> will change at this year's Dayton Hamvention, though, now that the XYL
> has given permission to buy a "state of the art" rig. I've never been
> on the WARC bands, and people tell me I need to....
>
> COME TO DAYTON ! ! ! ! !
>
>
>
>
>
> Ken Gunton WB6QWF ken at ohiomicrowave dott comm
> Ohio Microwave
> Microwave and RF Components to 110 GHz
> http://www.ohiomicrowave.com

2288. Looking For AL-50 Manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-21 04:03:46 UTC
From: Bill <wstarks@citynet.net>
Message-ID: <3c9958ee$1_2@corp.newsgroups.com>
Source record: 45377

I need a manual or copy of the manual for a Texscan AL-50 Spectrum Analyzer.

Bill

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2289. Wideband Amp Tests

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-21 05:42:01 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <3C997223.1ECB553D@flash.net>
Source record: 45379

I've just finished testing a breadboard wideband amp from an old RF Design article that I somehow overlooked all these years. The article is from the February 1989 issue of RF Design (an industry trade journal, free if you work in electronics), titled "A New Negative Feedback Amplifier" by Victor Koren (of Tadiran in Israel). I was sent a copy of the article recently, but it looked vaguely familiar, and sure enough, I had the original article torn out and saved (in my vast unsorted pile of paper--which I waded through looking for the article, and found it). Re-reading the article, it didn't look all that promising, but the actual prototype circuit looked easy enough to duplicate.
Instead of classic negative feedback amps using transformers, this article claims use of a directional coupler to improve reverse isolation. The original prototype used an MRF587 bipolar transistor. I didn't have one of those, but I did find an old MRF586--the same die as the 587, in a TO-39 case. I used FT37-75 cores for the input directional coupler and the output bifilar transformer. A 1:10 turns ratio for the coupler was used in the article's circuit. I used the same turns ratio, using an actual 2:20 turns to get a hoped-for lower frequency response. The bifilar output transformer used 16 turns for each winding.
I used test equipment at work to measure gain, response, IMD; and a calibrated signal generator with communications receiver and audio voltmeter at home to measure MDS and derive noise figure.

The circuit worked immediately and was unconditionally stable (input or output or both open circuit or terminated), using a 1.5GHZ spectrum analyzer to check for instability products. Bias was set for 35mA with a 12.8volt supply. Performance of the single-ended circuit turned out to be quite good.
Gain was about +10.5dB, being very flat over a wide bandwidth, with a slight peaking of +11.0dB from 58-104 MHz, with +11.6dB peak at 82MHz using my cores and suspended-over-a-groundplane circuit construction. At the low end, response was down -1dB at 75kHz; -2dB at 48kHz; -3dB at 35kHz--pretty good LF response for only 2 turns on the directional coupler primary.

Reverse Isolation was very good-- 38dB from 225kHz to 30MHz, dropping to 30dB at 95MHz and 29dB at 110MHz.

Return Loss, both input and output, were both very good; in fact, input RL got slightly better when the output termination was removed; output RL got poorer when input termination was removed, which is what's normally expected.
Input Return Loss--250kHz 15.4dB; 500kHz 21.8dB; 1MHz 25.4dB; 15MHz 24.5dB; 30MHz 20.4dB 50MHz 14.2dB.
Output Return Loss--250kHz 24.2dB; 500kHz 24.5dB; 1MHz 24.8dB; 15MHz

22.4dB; 30MHz 18.6dB; 50MHz 15.0dB. (Recall that 14dB RL = 1.5:1 VSWR.)

IMD--tones of 3 and 4 MHz were used, set to 0dBm each at output of amp, to spectrum analyzer.
3IMD product at -77dBm = +38 OIP3 (products at 10,11,5,2 MHz)
2IMD product at -50dBm = +50 OIP2 (products at 7,1 MHz)

Max output power--amp was still linear at +20dBm single-tone output, at 3MHz.

Noise Figure tests--using information from various sources, notably Hayward's book "Introduction to RF Design", by measuring the MDS of a communications receiver, then determining its filter's noise bandwidth, the noise figure of the receiver alone can be determined. Then by cascading the amp with the receiver in series, the overall noise figure can be determined, and then the noise figure of the amp itself can be determined.
Hayward discusses noise bandwidth for a communications receiver using steep-skirted filters to be equivalent to the -6dB bandwidth of the filter. This is easily measured with a calibrated signal generator and an audio rms voltmeter connected to the receiver's audio output. Then the MDS (3dB increase in audio output) of the receiver and amp/receiver combination is measured, and the values plugged into the formulas to derive the various noise figures.
My receiver, an AR-7030, with internal preamp off, in CW mode with narrowest filter selected (500Hz--measured -6dB bandwidth of 570Hz) had an MDS of -127dBm, to give a noise figure of 19.4dB.
Amp and receiver together had an MDS of about -136.7 dBm, for an overall noise figure of 9.7dB.
(All noise figure tests were done at 450kHz, mainly because I'm interested in a low-NF LF amplifier.)
Substituting values in the cascade noise figure equation to solve for the amp's noise figure, using Fnet = 9.7dB; F2 = 19.4dB; G1 = 10.5dB, gives a value for F1, the amp, as 2.2dB noise figure. (I have the hardest time remembering that all values in the cascade NF equation are not dB's but algebraic numbers, and then converting the final result back to dB for the final NF value.)
So, the amp has a respectable low noise figure at 450kHz.

Overall, this is a pretty decent amp. I should substitute a common 2N5109 and redo the noise figure measurement, but I don't expect the results to change much. The datasheet for the MRF586 doesn't indicate a very low NF for this device. Perhaps the best features of the amp are its very good input and output return loss (VSWR) values and its good reverse isolation. Having a low noise figure and good low frequency response, along with decent IMD performance, doesn't hurt, either! And no additional "bandaids", such as ferrite beads, were needed to tame any instabilities.
If you're looking for a decent-performing amp, you might want to get a copy of the article and breadboard the circuit, and give it a try.

(If you're unable to find this article, I could be persuaded to mail a copy, for postage and copying costs. Note that 4 patents are listed, pertaining to this amp, if you have thoughts of making this amp available for sale commercially.)
Steve AA7U

2290. Need mods for AIDC 3733

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-21 10:05:44 UTC
From: lanturlu@excite.com
Message-ID: <3c99affb.3404577@news.u-picardie.fr>
Source record: 45382

Hello all

I need mods for converter AIDC 3733 for use with AO40

Thanks you very much

2291. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-21 12:10:47 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u9jjmb7rhoo4d3@corp.supernews.com>
Source record: 45383
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

"Melissa in Colorado" <melissa@NODARNSPAMupalliance.org> wrote in message news:Xns91D7AE19C53C1melissaNN0DARNSPAMup@206.124.0.13...
>
> Is it true, what I hear, that amateur radio has been dying out lately, due
> to cell phones of all things? You can't exactly have QSO's with people all
> over the world, using cell phones.

Try going to http://qrp.lehigh.edu/lists/qrp-l/, subscribe to the reflector for just a few days, then ask that question.

Or like Ken said, go to Dayton, then ask that question.

The numbers are down, no doubt. But dying out is a little strong. I would say there certainly seems to be more interest in homebrewing than 10 years ago. Could be just that the Internet brings more homebrewers/kit builders together. Certainly it makes parts easier to get and gives kit suppliers easier access to their market.

BTW, as nice as an SB-102 is, newer kits can run circles around it at a fraction of the price. Nowadays, when you buy a Heathkit you are buying an antique, and paying antique collector prices for it. If you could find a NIB 102, I'll bet it will fetch a couple of grand. Seems like a few months back an unbuilt HW-7 fetched about $800 ... this is a radio worth less than $50 built.

If you really want to melt solder, take a peek at the stuff from Elecraft, NorCal, Small Wonder Labs, OHR, Red Hot Radio, etc. etc. etc. Then look at Homebrew stuff from K8IQY, NJQRP, Harry's Homebrew Homepage, EI9GQ, etc. etc. In fact, if you go to QRP ARCI's links page, they must have a list of 50 kit suppliers. You won't get the nice feeling of building an old Heathkit (if you can stand to put it together after seeing the price), but you will get a nicer rig for a bunch less money.

didleydadidah

2292. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-21 13:33:33 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <Nilm8.184391$uv5.15647242@bin6.nnrp.aus1.giganews.com>
Source record: 45384

I sold a partially built Heath audio spectrum analyzer for $400 on the Bay a couple years ago. it had collected dust here since 1985. I also sold a rebuilt Dynaco ST70 for over $500 -- the Audio Research modification -- I asked the guy 3 times if he was sure he wanted to pay that much. I felt so guilty I gave the proceeds to an inner city school I do some work for. Lastly, some guy in Taiwan paid $113 for a Leader distortion meter, it cost a fortune to ship. You can buy a used HP334 for almost as much.

"Patch" <bob_acord@msn.com> wrote in message
news:ed3m8.71967$q83.14576660@twister.rdc-kc.rr.com...
> There are collectors out there that hoard this stuff still new in the box.
> They wouldn't dream of building one. I always thought the fun of Heathkit
> was in the building. Do a search on Ebay for Heathkit. You can find a lot
of
> it there.
>
>
> "Melissa in Colorado" <melissa@NODARNSPAMupalliance.org> wrote in message
> news:Xns91D6AD2BA239melissaNN0DARNSPAMup@206.124.0.13...
> > Has anyone seen any old unbuilt Heathkit SB102 transcievers around for
> sale?
> > Not sure if any even still exist in unbuilt form.
> >
> > --
> > - Melissa
> > Somewhere in Colorado
>
>

2293. Re: Wideband Amp Tests

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-21 13:50:57 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <3C99E541.F2CE6D92@dialpoint.net>
Source record: 45385

While it is nice to play with circuits do you have any idea how it will
compair to one of the MMICS ? Something like a mar6.
Most of the work has been done internal so all you need is a couple of
isolating capacitors and one resistor.

Steve Ratzlaff wrote:
>
> I've just finished testing a breadboard wideband amp from an old RF
> Design article that I somehow overlooked all these years. The article is
> from the February 1989 issue of RF Design (an industry trade journal,
> free if you work in electronics), titled "A New Negative Feedback
> Amplifier" by Victor Koren (of Tadiran in Israel). I was sent a copy of
> the article recently, but it looked vaguely familiar, and sure enough, I
> had the original article torn out and saved (in my vast unsorted pile of
> paper--which I waded through looking for the article, and found it).
> Re-reading the article, it didn't look all that promising, but the
> actual prototype circuit looked easy enough to duplicate.
> Instead of classic negative feedback amps using transformers, this
> article claims use of a directional coupler to improve reverse
> isolation. The original prototype used an MRF587 bipolar transistor. I
> d

2294. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-21 14:02:52 UTC
From: k7mem@myrealbox.com
Message-ID: <270a577d.0203210602.3433cd65@posting.google.com>
Source record: 45386
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

Melissa in Colorado <melissa@NODARRNNSPAMupalliance.org> wrote in message news:<Xns91D77DA3BF41BmelissaNN0DARNSPAMup@206.124.0.13>...
> "Patch" <bob_acord@msn.com> bestowed such eternal wisdom upon us by
> saying from news:ed3m8.71967$q83.14576660@twister.rdc-kc.rr.com:
>
> > There are collectors out there that hoard this stuff still new in the
> > box. They wouldn't dream of building one. I always thought the fun of
> > Heathkit was in the building. Do a search on Ebay for Heathkit. You can
> > find a lot of it there.
>
> I did but didn't find a new unbuilt SB102. I'd like to build one now because
> I was NASA certified in soldering in 1990 and it would be cool to build one
> and get on the wir with it. I'm KW0WW BTW.

Being a certified solderer was never a prerequisite for putting together a Heathkit. The 1 or 2 pages on "How To Solder", in all of the Heath manuals, was usually enough for anyone to put one together and get them running. Although my first kit, at the tender age of 10, was a Knight Kit Star Roamer I have built, used, and still use many Heathkits. They made good units and are easy to fix, but that may be because I grew up with them and have had 40 years to understand them. I have a SB-101 on my workbench right now with a keying delay problem. I know what the problem is, I'm just waiting on the replacement tube.

IMHO, buying a unbuilt Heathkit for the purposes of building it would be a huge waste of money. You would pay several thousand dollars for a unbuilt SB-102 and, the second you put a soldering iron to the first wire the worth would drop to less than 5% of what you paid. Putting together one of the newer kits, as opposed to a Heathkit, is no less satisfying and you don't run into the huge investment loss.

An advantage of a newer kit is that it is going to be designed with a newer technology. Something that may be easier to understand than taking a trip in the "wayback" machine and learning about tubes. And the newer kit will work as good, if not better, than a Heathkit. The money you save can then be spent on other goodies, like a nice shiny new CW key. :)

My Heathkits include, but are not limited to: Twoer, Sixer, DX-40, SB-10, HO-10, HR-1680, HX-1681, HM-102, HM-2102, ...
I love then all and still use them all, but I would like a kit made by someone else just as much.

--
Martin E. Meserve, K7MEM

I respond to news groups and E-Mail on my own time and therefore my responses may not be as timely as you, or I, would like them to be. If I seem to be ignoring you, send me another E-Mail to jog my memory. Opinions are my own and do not reflect the opinions of my employer.

2295. VHF Front End Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-21 16:50:55 UTC
From: Paul <psdoddsSPAM@hotmail.SPAM.com>
Message-ID: <a7d31gnkt1@news.liv.ac.uk>
Source record: 45387

Hi all - I'm new here and I have been reading posts for some time.

I am currently building an airband receiver (UK 118MHz to 137MHz) and want to know what is the best frond end to use whan attaching a 50 Ohm quarter wave vertical.

I have considered using common base and common emitter circuits, with an impedance matching circuit in between. Is this a good way?

Any help would be appreciated...

Paul

--

2296. test3

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-21 18:13:49 UTC
From: ASNAR <agustinb@grapesadsl.com>
Message-ID: <a7d7svkbn1@news.comunitel.net>
Source record: 45388

test3

2297. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-21 21:57:52 UTC
From: Melissa in Colorado <melissa@NODARNSPAMupalliance.org>
Message-ID: <Xns91D898402D3A3melissaNN0DARNSPAMup@206.124.0.13>
Source record: 45399
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

"xpyttl" <xpyttl_nospam@earthling.net> bestowed such eternal wisdom upon
us by saying from news:u9jjmb7rhoo4d3@corp.supernews.com:
...
> If you really want to melt solder, take a peek at the stuff from
Elecraft,
> NorCal, Small Wonder Labs, OHR, Red Hot Radio, etc. etc. etc. Then look
at
> Homebrew stuff from K8IQY, NJQRP, Harry's Homebrew Homepage, EI9GQ, etc.
> etc. In fact, if you go to QRP ARCI's links page, they must have a list
of
> 50 kit suppliers. You won't get the nice feeling of building an old
> Heathkit (if you can stand to put it together after seeing the price),
but
> you will get a nicer rig for a bunch less money.

Ok, then can I actually build a full featured all band HF transceiver that
will stand up against the Asian assembled ones they sell retail?

One of Heathkit's original failings was that, for the same money, you
couldn't build a rig with anything near the features of a commercially made
ones.

--
- Melissa
Somewhere in Colorado

2298. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-21 22:01:53 UTC
From: Melissa in Colorado <melissa@NODARNSPAMupalliance.org>
Message-ID: <Xns91D898EE54503melissaNN0DARNSPAMup@206.124.0.13>
Source record: 45400
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

"xpyttl" <xpyttl_nospam@earthling.net> bestowed such eternal wisdom upon
us by saying from news:u9jjmb7rhoo4d3@corp.supernews.com:
...
> If you really want to melt solder, take a peek at the stuff from
Elecraft,
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> etc. In fact, if you go to QRP ARCI's links page, they must have a list
of
> 50 kit suppliers. You won't get the nice feeling of building an old
> Heathkit (if you can stand to put it together after seeing the price),
but
> you will get a nicer rig for a bunch less money.

BTW, it sounds interesting, but I'm not really into QRP. Is anyone making a
full featured all band HF transceiver kit that puts out full power? (like
100-200 watts PEP out?)

--
- Melissa
Somewhere in Colorado

2299. Re: Wideband Amp Tests

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 01:20:27 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <3C9A8656.909EDFD3@flash.net>
Source record: 45389

Hi Ralph,
There is little comparison between a MMIC and a discrete amp. Only noise figure might be similar. The discrete amp will almost always be superior in terms of overload resistance, and most of the other parameters I tested.
Makers of amps for the hobby market, such as Kiwa, Wellbrook, Advanced Receiver Research continue to sell their products, when MMICs are readily available.
If your only interest in a preamp is sensitivity, and you don't care about any of the other parameters, and you plan to use the amp in a very-rural area, far from any sort of potential overload problem (transmitters), then perhaps a simple MMIC circuit might be the best/easiest solution.
Steve

Ralph Mowery wrote:
>
> While it is nice to play with circuits do you have any idea how it will
> compair to one of the MMICS ? Something like a mar6.
> Most of the work has been done internal so all you need is a couple of
> isolating capacitors and one resistor.

2300. Re: Wideband Amp Tests

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 01:43:20 UTC
From: JD <dyson@jdyson.com>
Message-ID: <zQvm8.757$Mx3.162938@news1.iquest.net>
Source record: 45390

"Steve Ratzlaff" <sratzlaf@flash.net> wrote in message news:3C9A8656.909EDFD3@flash.net...
> Hi Ralph,
> There is little comparison between a MMIC and a discrete amp. Only noise
> figure might be similar. The discrete amp will almost always be superior
> in terms of overload resistance, and most of the other parameters I
> tested.
> Makers of amps for the hobby market, such as Kiwa, Wellbrook, Advanced
> Receiver Research continue to sell their products, when MMICs are
> readily available.
> If your only interest in a preamp is sensitivity, and you don't care
> about any of the other parameters, and you plan to use the amp in a
> very-rural area, far from any sort of potential overload problem
> (transmitters), then perhaps a simple MMIC circuit might be the
> best/easiest solution.
> Steve
>
A good discrete circuit can probably outperform an excellent mmic,
but there are some damned good mmics out there. For example, take
a look at the Stanford SGA-4586 or the SGA-6X89... They can put out
between 10 and 100mw (depending on unit), and have somewhere between
1.8 and 3dB NF. They are also made up from SiGe, therefore doing
better on the low end (NF) than PHEMT fets.

There is indeed an issue of input/output isolation when using most
mmics, but there are some parts that have lesser specs in some areas,
but also provide much better input/output isolation.

John

2301. FS: Miller Coils & Other Coils!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 02:40:49 UTC
From: rlucch2098@aol.com
Message-ID: <20020321214049.25773.00000199@mb-fk.aol.com>
Source record: 45391

Hi All;
Some more coils & stuff found around the Shack :-)
Lot #1 is 40 Miller adjustable coils, Mostly NOS, brand new.
Price is $40 ppd Conus.
PIC>>
http://www.baltimorepress.com/~wa2rqy/40millercoils.jpg

Lot #2 is 52 assorted, adjustable & fixed coils from experimentor, price is
$24.00ppd.
Pic>>
http://www.baltimorepress.com/~wa2rqy/52coils.jpg

Lot #3 is 3 coil forms, 2(3-pins) look like the ones used on the GD-1
Heathkit Grid Dipper & the big one(5-pins) is an Amphenol cat# 24-5P and is
marked "OSC, 7.0mcs.".
Price is $13.00ppd.
Pic>>

http://www.baltimorepress.com/~wa2rqy/3coilforms.jpg

Thanks es 73....Rich WA2RQY (1961)
WA2RQY's "confusion Radio" Web-Page
Http://members.aol.com/rlucch2098/index.html
RLUCCH2098@aol.com
"Keep those heaters on"

2302. FS: ELECTROVOICE 664 Mike w/Cable

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 02:42:26 UTC
From: rlucch2098@aol.com
Message-ID: <20020321214226.25773.00000202@mb-fk.aol.com>
Source record: 45392

Hi All;
I have for Sale a working EV664 microphone, comes with connector & healthy length of cable.
Condition is real nice overall, some minor pitting on the sides id the same area shown in pic #2.
Price is $160ppd Conus.
Pics>>

http://www.baltimorepress.com/~wa2rqy/ev664-1.jpg

http://www.baltimorepress.com/~wa2rqy/ev664-2.jpg

Thanks es 73....Rich WA2RQY (1961)
WA2RQY's "confusion Radio" Web-Page
Http://members.aol.com/rlucch2098/index.html
RLUCCH2098@aol.com
"Keep those heaters on"

2303. Re: Pulling HC-49 Crystal in Super VXO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 03:28:54 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C9AA4F6.5B91E5AC@ieee.org>
Source record: 45393

Bill,

It all depends on how the crystal was cut. Some are more pullable than others.

A crystal may be modeled by an RLC circuit in parallel with a very small (like 7pF) capacitor in parallel.

If I understand correctly, the larger the C in the RLC and smaller load capacitors and parasitic capacitors will yield a more pullable crystal.

Buy some crystals and try it!

Clyde
KA1CRV

Bill Harbour wrote:

> Has anyone had any experience with how far you can pull the HC-49U
> xtal in the Super VXO?? Especially those xtals clost to 40m.
>
> Tnx,
>
> Bill
> KD4PWB

2304. Re: In need of a PCB Manufacturer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 03:42:17 UTC
From: "Clyde R. Shappee" <cshappee@ieee.org>
Message-ID: <3C9AA819.64FF0A31@ieee.org>
Source record: 45394

Steve,

I have had good luck with Advanced Circuits in Colorado. They did 2 protos for $33 each, plus shipping. 2 layer. I think they will go up to 30 square inches at that price.

Clyde
KA1CRV

Steve wrote:

> Hi,
>
> I'm in need of the name and address of a small company that can make
> small
> inexpensive printed circuit boards for private individuals. There was a
> place
> called Atlas Circuits but I think their no longer in business.
>
> If you can help me, please email me at: steve34613@atlantic.net
>
> Thank you
> Steve

2305. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 04:23:43 UTC
From: JB <ac6tk@nospamcybertime.net>
Message-ID: <a7eaam$2vnh$1@madmax.keyway.net>
Source record: 45395
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

You can always go to the swap meet and pick one up and RE-build It...
That's how I got mine in '76. Most of the parts are easily replaced
by generics and through original manufacturers. The dial parts and
the drive belts are the biggest problem. I suspect the drive belts could
be found in vacuum cleaner shops or from PRB (tape/vcr/projector
belt jobber).

Jim, ac6tk

"Tracy" <n1rkt@blomand.net> wrote in message news:a7bm7c$3h5u$1@news3.infoave.net...
: Hi Ken,
:
: Give you $20 bucks for that and you can have the new stuff, I'll stick to
: the old!
:
: Good Luck!
:
:
: Ken Gunton <spam@ohiomicrowave.com> wrote in message
: news:biuh9uk7fdco9fr4fko6iv7v1bki25sgsb@4ax.com...
: >
: >
: > On 19 Mar 2002 17:01:15 -0700, Melissa in Colorado
: > <melissa@NODARNSPAMupalliance.org> wrote:
: >
: > >Has anyone seen any old unbuilt Heathkit SB102 transcievers around for
: sale?
: > >Not sure if any even still exist in unbuilt form.
: >
: > I built mine in 1969 and still use it. Original 6146's, too! That
: > will change at this year's Dayton Hamvention, though, now that the XYL
: > has given permission to buy a "state of the art" rig. I've never been
: > on the WARC bands, and people tell me I need to....
: >
: > COME TO DAYTON ! ! ! ! !
: >
: >
: >
: >
: >
: > Ken Gunton WB6QWF ken at ohiomicrowave dott comm
: > Ohio Microwave
: > Microwave and RF Components to 110 GHz

: > http://www.ohiomicrowave.com
:
:

2306. The transformer in a noise bridge circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 05:24:40 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0203212124.21d541f9@posting.google.com>
Source record: 45396
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

As I mentioned before, I would like to build a modified version of the SWR noise bridge shown on page 27-25 of _The ARRL Antenna Book_. The schematic is available at http://www.qsl.net/wq1rp/noisebrg.htm, as the New England QRP group sells a kit.

I should note that my version of the noise bridge will be an improved version of the MFJ-212 Matchmaker (http://www.mfjenterprises.com/products.php?prodid=MFJ-212). Please note that the MFJ-212 does NOT have the resistance or reactance dial, and my noise bridge will not either.

The NE555P chip interacts with the diodes and resistor to produce an output voltage that consists of a 1000 Hz square wave. When it interacts with the Zener diode, a broadband RF noise source is produced. The 2N2222A BJTs amplify the RF white noise signal.

Exactly what does the transformer and the rest of the circuit do? My general understanding is that the transformer sends the RF noise into the transmission line. Since there turns ratio is 1:1, the voltage and current ratios are 1:1. The RF noise is sent towards the antenna through the coaxial cable. Any mismatch between the coax and antenna results in reflected RF voltage, which propagates towards the receiver. The larger the reflected RF noise signal, the louder the noise you hear. Adjusting the resistance and reactance dials for the minimum noise reveals the feedpoint impedance.

Some questions:
1. What do the 82 microfarad and 47 microfarad capacitors between the transformer and antenna do? Are they part of an SWR bridge circuit?
2. When the RF voltage returns to the noise bridge, what prevents the transformer from coupling the RF back to where it originated? Or is it stopped at the back end of the last amplifier? (Sorry, I haven't studied transformers in 8 years and never really understood them in the first place.)
3. How would I modify the noise bridge to (gasp!) omit the resistance and reactance dials? Some of you might say that this circuit would no longer be a noise bridge, but the MFJ-212 lacks those dials. I simply want to send the RF noise to the receiver so that I can adjust the antenna and tuner for minimum noise (a byproduct of minimum SWR).
4. Where can I buy an Amidon BLN-43-2402 ferrite binocular core? What acceptable substitutes are there?

Jason Hsu, AG4DG
jason_hsu_802701@@@@yahoo.com
http://www.jasonhsu.com/ham_radio-technical.html

2307. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 05:51:07 UTC
From: Mike Rofon <TheRealExray@netscape.net>
Message-ID: <3C9AC64B.3757AE6D@netscape.net>
Source record: 45397
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

JB wrote:
>
> You can always go to the swap meet and pick one up and RE-build It...
> That's how I got mine in '76. Most of the parts are easily replaced
> by generics and through original manufacturers. The dial parts and
> the drive belts are the biggest problem. I suspect the drive belts could
> be found in vacuum cleaner shops or from PRB (tape/vcr/projector
> belt jobber).
>
> Jim, ac6tk

Hehe, I was gonna suggest that too but I figured it was a 'bad' answer
and I'd get flamed. Refurbing an old set can provide many more 'hobby
hours' as opposed to simply opening the can and serving the dish.
TRE,
WX4A

2308. Re: Wideband Amp Tests

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 07:20:57 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <a0il9ushqhs1rlpsmqk3rm9l7apej3i6r4@4ax.com>
Source record: 45398

On Thu, 21 Mar 2002 08:50:57 -0500, Ralph Mowery
<rmowery@dialpoint.net> wrote:

>While it is nice to play with circuits do you have any idea how it will
>compair to one of the MMICS ? Something like a mar6.

MAR-6 is the worst device for HF preamplification, unless you have a
very narrow front end. The gain is very high and output very low, so
it will saturate at quite low input levels. It is however, very usable
for LF/MF indoor loops, which are quite selective but produce a very
low output.

However, MMICs like MAV-11 have output power and output IP3 points a
few dBs below those of the 1989 RF Design specifications with similar
gain figures.

If you are going to wind transformers, why not put two MAV-11s in push
pull and get similar specifications as the 1989 design.

Paul OH3LWR

2309. Help convert 14Mhz RF amp 7Mhz pse

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 09:21:48 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c9af541.7977318@news.freeserve.net>
Source record: 45401

Hi Folks,
I would like to convert a 14Mhz Class C RF amp to 7Mhz
the circuit is here..

www.corn2.freeserve.co.uk\25wrfamp.gif

My knowledge of RF amps is almost nil, so I know enough to know I need
help here.
I believe the input and interstage is broadband but the output is a
frequency specific 'T' matching network, but I'm not sure.
If someone could guide me on this one I'd appreciate it.

thanks Mike W

2310. Manuals ? >> read me !

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 09:23:58 UTC
From: F5LCY <f5lcy@libertysurf.fr>
Message-ID: <a7etan$2i8n$3@news6.isdnet.net>
Source record: 45402

Can be found at :
http://f6keh.free.fr/index_r
MANUALS then AMATEUR RADIO

2311. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 13:40:28 UTC
From: Mike Yetsko <joe@user.com>
Message-ID: <u9mdci1aj5qc5e@corp.supernews.com>
Source record: 45403
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

The Elecraft K2 in base configuration is a QRP rig. Well, close to it.
Mine
puts out almost 15W on some bands, although I never use it over 10W. It
can be built to 'fine tune' it to closer to 5W max if you're really serious
about
QRP. If you build it that way, it's slightly more frugal with the battery
than
it is if you 'turn it down' to 5W.

But if you're not into QRP, there is an optional kit to make it a QRO rig.
At one time they were talking about a 50W or a 100W option.

I know they've tested it, but I don't recall if it's offered for sale yet.
Obviously not a battery power rig anymore. In fact, you have to give up
the 'top panel' options for it. That means no internal battery and no ATU.
But the ATU is for 20W max anyway.

Now, who knows if the optional QRO will ever finally make it out, but
the rig is a nice piece of work even as is. And if you want to build QRO,
build an amp for it. There's already kits (or at least, parts list as
'pseudo-
kits' what with the FCC rules to prevent abuse on 11M) for amps on the
market for the K2 and 817 that are attuned to the fact it's a QRP rig.

I thought about an outboard amp at home for mine, but it just seems I'm
not having too much trouble with just 10W.

Mike

"Melissa in Colorado" <melissa@NODARNSPAMupalliance.org> wrote in message
news:Xns91D898EE54503melissaNN0DARNSPAMup@206.124.0.13...
> "xpyttl" <xpyttl_nospam@earthling.net> bestowed such eternal wisdom upon
> us by saying from news:u9jjmb7rhoo4d3@corp.supernews.com:
> ...
> > If you really want to melt solder, take a peek at the stuff from
> Elecraft,
> > NorCal, Small Wonder Labs, OHR, Red Hot Radio, etc. etc. etc. Then look
> at
> > Homebrew stuff from K8IQY, NJQRP, Harry's Homebrew Homepage, EI9GQ, etc.
> > etc. In fact, if you go to QRP ARCI's links page, they must have a list
> of
> > 50 kit suppliers. You won't get the nice feeling of building an old
> > Heathkit (if you can stand to put it together after seeing the price),
> but

> > you will get a nicer rig for a bunch less money.
>
> BTW, it sounds interesting, but I'm not really into QRP. Is anyone making
a
> full featured all band HF transceiver kit that puts out full power? (
like
> 100-200 watts PEP out?)
>
> --
> - Melissa
> Somewhere in Colorado

2312. Re: dsp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 14:50:34 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3c9bd462$0$13483@echo-01.iinet.net.au>
Source record: 45413

Stephen
We have got to the PCB stage for the DDS/PLL synthesizer. This would be suitable for a wideband receiver LO if the performnace is as good as we think
Resolution could be 1 Hz or better if required from 1-2 GHz. By substituting different PLL chips and VCO modules (all should be pin compatible) itr should be possible to cover a wide frequency range from 100 MHz up. John Miles should have a prototype built in a couple of weeks.We will keep you posted.

Richard

"stephen zl1any" <g_and_s_pearce@xtra.co.nz> wrote in message news:3c969d08@zfree.co.nz...
>
> Hi
> Any suggestions for an incircuit programmable dsp
> with flash ram to serve as the backend of a digital if receiver?
>
> I plan to use bpf/first mixer/ crystal filter then
> ad9870 if processor with second crystal if ... as a sw freq reciever.
> the first lo will be pll and have fine freq resolution to get round the 6.25
> KHz spacing limitation of the on board synthesiser in the ad9870.
>
> The ad9870 output is a baseband digital bit stream incorporating
> i and q data vectors and selectable agc information (to give effectively
> higher
> dynamic range)
>
> I was looking at the dsPIC30F processors .. particulary
> dsPIC30F6012 .. but these will not be available until later this year ...
>
> Has anyone suggestions on an alternative dsp capable processor to processes
> the base band bit stream and drive a codec
> for audio output
>
>
> Thanks
>
> Stephen
>
>
>

> http://www.zfree.co.nz
>

2313. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 15:16:39 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u9mip588lhsm53@corp.supernews.com>
Source record: 45404
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

OK, the K2 I believe is now available with the 100W option.

As far as I can tell, none of the kits have all the features of the rice boxes, depending on what features you care about. The K2 trades off some of the frills of the mid range commercial rigs to get top of the line receiver performance. There are a number of K2 features not found in the commercial rigs, but they tend to be features of interest to QRPers. A fully decked-out K2 is comparable in price to a mid-range commercial rig. The receiver specs are more comparable to a Japanese rig three times the price.

(oh yeah, the obvious URL http://www.elecraft.com, also see the reviews at the Adventure Radio Society site and QST. ARS has some nice comparative data).

I happen to have a K1, which is a much more limited rig than the K2 (and a much more limited price!) What struck me is the ergonomics. The rig is much better laid out than my Icom. In spite of being a low-end rig, the thing is a joy to use.

It's a little hard to get objective feedback on the K2. People who have them are absolutely rabid about the things. I would suggest finding someone who has one and playing with it a bit. In my opinion, it's a nice rig, and I have played with a couple. But you're not going to learn anything from talking to someone who has one ... they are all blinded by the Elecraft mojo.

..

"Melissa in Colorado" <melissa@NODARNSPAMupalliance.org> wrote in message news:Xns91D898EE54503melissaNN0DARNSPAMup@206.124.0.13...
>
> BTW, it sounds interesting, but I'm not really into QRP. Is anyone making a
> full featured all band HF transceiver kit that puts out full power? (like
> 100-200 watts PEP out?)

2314. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 15:50:51 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <u9mktp5hfqige5@corp.supernews.com>
Source record: 45405
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:u9mip588lhsm53@corp.supernews.com...
> OK, the K2 I believe is now available with the 100W option.

Well, I take that back. People on the Elecraft reflector are talking like they have the 100W option, but I see no trace of it on the web site. (Since I'm not a QROer, I have to admit blowing by all those notes about the amp anyway).

k5oor's first build of his HF Packer amp is closed, next build likely not until the end of the year (http://www.hfprojects.com)

Also, I would suggest downloading the construction manual. Heathkit never made a manual as good as Elecraft's.

..

2315. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 16:18:20 UTC
From: Smith-Gaspard <jsmith52@tampabay.rr.com>
Message-ID: <3C9B5AEB.B5C7997D@tampabay.rr.com>
Source record: 45406
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

Why don't you correct your Radio Amateur's call letter?
73 de Jim W4ONO .-.-.
==========

Melissa in Colorado wrote:
>
> Ken Gunton <spam@ohiomicrowave.com> bestowed such eternal wisdom upon us
> by saying from news:biuh9uk7fdco9fr4fko6iv7v1bki25sgsb@4ax.com:
>
> >
> >
> > On 19 Mar 2002 17:01:15 -0700, Melissa in Colorado
> ><melissa@NODARNSPAMupalliance.org> wrote:
> >
> >>Has anyone seen any old unbuilt Heathkit SB102 transcievers around for
> >>sale? Not sure if any even still exist in unbuilt form.
> >
> > I built mine in 1969 and still use it. Original 6146's, too! That
> > will change at this year's Dayton Hamvention, though, now that the XYL
> > has given permission to buy a "state of the art" rig. I've never been
> > on the WARC bands, and people tell me I need to....
>
> That sounds sweet, but I haven't even been on the air since about 1995, yet
> alone HF.
>
> Is it true, what I hear, that amateur radio has been dying out lately, due
> to cell phones of all things? You can't exactly have QSO's with people all
> over the world, using cell phones.
>
> --
> - Melissa
> KW0WW
> Somewhere in Colorado

2316. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 16:22:10 UTC
From: Smith-Gaspard <jsmith52@tampabay.rr.com>
Message-ID: <3C9B5BD2.D7B7B745@tampabay.rr.com>
Source record: 45407
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

A HeathKit unbuilt Model AT-1 transmitter sold last year on
eBay for USD $3870.00 ... I remember when it was sold for
$39.95 new ... times have changed.
73 de Jim W4ONO .-.-.
==========

xpyttl wrote:
>
> "Melissa in Colorado" <melissa@NODARNSPAMupalliance.org> wrote in message
> news:Xns91D7AE19C53C1melissaNN0DARNSPAMup@206.124.0.13...
> >
> > Is it true, what I hear, that amateur radio has been dying out lately, due
> > to cell phones of all things? You can't exactly have QSO's with people all
> > over the world, using cell phones.
>
> Try going to http://qrp.lehigh.edu/lists/qrp-l/, subscribe to the reflector
> for just a few days, then ask that question.
>
> Or like Ken said, go to Dayton, then ask that question.
>
> The numbers are down, no doubt. But dying out is a little strong. I would
> say there certainly seems to be more interest in homebrewing than 10 years
> ago. Could be just that the Internet brings more homebrewers/kit builders
> together. Certainly it makes parts easier to get and gives kit suppliers
> easier access to their market.
>
> BTW, as nice as an SB-102 is, newer kits can run circles around it at a
> fraction of the price. Nowadays, when you buy a Heathkit you are buying an
> antique, and paying antique collector prices for it. If you could find a
> NIB 102, I'll bet it will fetch a couple of grand. Seems like a few months
> back an unbuilt HW-7 fetched about $800 ... this is a radio worth less than
> $50 built.
>
> If you really want to melt solder, take a peek at the stuff from Elecraft,
> NorCal, Small Wonder Labs, OHR, Red Hot Radio, etc. etc. etc. Then look at
> Homebrew stuff from K8IQY, NJQRP, Harry's Homebrew Homepage, EI9GQ, etc.
> etc. In fact, if you go to QRP ARCI's links page, they must have a list of
> 50 kit suppliers. You won't get the nice feeling of building an old
> Heathkit (if you can stand to put it together after seeing the price), but
> you will get a nicer rig for a bunch less money.
>
> didleydadidah

2317. Re: The transformer in a noise bridge circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 18:28:24 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <jnqm9u8pgqtcvffiiad4vjnfs67utmne69@4ax.com>
Source record: 45408
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On 21 Mar 2002 21:24:40 -0800, jason_hsu@my-deja.com (Jason Hsu)
wrote:

snip

>Exactly what does the transformer and the rest of the circuit do?

This is the point of my suggesting YOU determine the minimum circuit
configuration of a bridge. Jason, you should start doing your own
homework by now and explaining to US how it works to both confirm your
understanding and become an active rather than passive participant.

>
>Some questions:
>1. What do the 82 microfarad and 47 microfarad capacitors between the
>transformer and antenna do? Are they part of an SWR bridge circuit?

There are only six (6) capacitors shown, none more than 0.01 ï¿½Fd. You
need to answer more questions than ask them at this point.

>2. When the RF voltage returns to the noise bridge, what prevents the
>transformer from coupling the RF back to where it originated?

Nothing - the consequences doesn't matter either. It is enough to
accept that it does couple back (the whole point of an imbalance).

>Or is it
>stopped at the back end of the last amplifier? (Sorry, I haven't
>studied transformers in 8 years and never really understood them in
>the first place.)

Understanding the minutia of transformers is wholly unnecessary, they
can be treated as black boxes if first you accept their principle
application of isolation and balance. Do you grasp the operational
necessities of the simple DC Wheatstone Bridge? No transformers there
to cloud the issue, and everything works the same as the noise bridge.
Visit the engineering section in a library at a community college for
an hour.

>3. How would I modify the noise bridge to (gasp!) omit the resistance
>and reactance dials? Some of you might say that this circuit would no
>longer be a noise bridge, but the MFJ-212 lacks those dials.

The facetious reply would be to peel off the labels and remove the
knobs.

Omitting the components would render it useless - unless you just want to listen to noise for no purpose.

>I simply
>want to send the RF noise to the receiver so that I can adjust the
>antenna and tuner for minimum noise (a byproduct of minimum SWR).

That won't happen in the direction you are moving.

>4. Where can I buy an Amidon BLN-43-2402 ferrite binocular core? What
>acceptable substitutes are there?
>
>Jason Hsu, AG4DG

Hi Jason,

I would have offered:
http://www.bytemark.com
as a source, but they seem intent on commercial suicide over the net by taking down working pages to replace them with the announcement of a new site being built. As alta vista revealed 515 references to the query "amidon ferrite" you could as easily find another vendor one would think.

I don't know why you are looking into binocular cores, but that is a move in the right direction; however, do you have a good reason (the right one that is)? Given your professed ignorance of transformers, you are in over your head to make changes in circuit design in advance of actually building a working, original model.

73's
Richard Clark, KB7QHC

2318. Re: The transformer in a noise bridge circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 19:11:43 UTC
From: k7itm@aol.com
Message-ID: <3200347.0203221111.47141b98@posting.google.com>
Source record: 45409
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

The transformer is an integral part of the bridge. To get zero going
to the receiver, the voltage at the top end and at the bottom end of
the transformer must be 180 degrees out of phase and equal magnitude.
That happens if the net impedance load on each end of the transformer
to common is the same. -- I'm not sure what schematic you're looking
at...I have the noisebrg.htm schematic up, and it shows only a 27pF
cap feeding the antenna from the transformer. If the "unknown" is
then 50 ohms, you get balance with a 27pF capacitance on the variable
and a 50 ohm setting of the variable. If you want to omit the
variables, just use a 50 ohm fixed on the top end and replace the
variable cap with a short circuit; on the bottom end you could omit
the cap (replace with a short) or use, say, a tiny 0.01uF cap to block
DC (dunno why you'd need it, though).

You should be able to get an Amidon part from Amidon Associates,
though when I visited their web site recently it looked like they are
discouraging direct purchase of small quantities. Do a Google search
for Amidon and you'll turn up other sources.

Cheers,
Tom

jason_hsu@my-deja.com (Jason Hsu) wrote in message
news:<f7d9a152.0203212124.21d541f9@posting.google.com>...
> As I mentioned before, I would like to build a modified version of the
> SWR noise bridge shown on page 27-25 of _The ARRL Antenna Book_. The
> schematic is available at http://www.qsl.net/wq1rp/noisebrg.htm, as
> the New England QRP group sells a kit.
>
> I should note that my version of the noise bridge will be an improved
> version of the MFJ-212 Matchmaker
> (http://www.mfjenterprises.com/products.php?prodid=MFJ-212). Please
> note that the MFJ-212 does NOT have the resistance or reactance dial,
> and my noise bridge will not either.
>
> The NE555P chip interacts with the diodes and resistor to produce an
> output voltage that consists of a 1000 Hz square wave. When it
> interacts with the Zener diode, a broadband RF noise source is
> produced. The 2N2222A BJTs amplify the RF white noise signal.
>
> Exactly what does the transformer and the rest of the circuit do? My
> general understanding is that the transformer sends the RF noise into
> the transmission line. Since there turns ratio is 1:1, the voltage and
> current ratios are 1:1. The RF noise is sent towards the antenna

> through the coaxial cable. Any mismatch between the coax and antenna
> results in reflected RF voltage, which propagates towards the
> receiver. The larger the reflected RF noise signal, the louder the
> noise you hear. Adjusting the resistance and reactance dials for the
> minimum noise reveals the feedpoint impedance.
>
> Some questions:
> 1. What do the 82 microfarad and 47 microfarad capacitors between the
> transformer and antenna do? Are they part of an SWR bridge circuit?
> 2. When the RF voltage returns to the noise bridge, what prevents the
> transformer from coupling the RF back to where it originated? Or is it
> stopped at the back end of the last amplifier? (Sorry, I haven't
> studied transformers in 8 years and never really understood them in
> the first place.)
> 3. How would I modify the noise bridge to (gasp!) omit the resistance
> and reactance dials? Some of you might say that this circuit would no
> longer be a noise bridge, but the MFJ-212 lacks those dials. I simply
> want to send the RF noise to the receiver so that I can adjust the
> antenna and tuner for minimum noise (a byproduct of minimum SWR).
> 4. Where can I buy an Amidon BLN-43-2402 ferrite binocular core? What
> acceptable substitutes are there?
>
> Jason Hsu, AG4DG
> jason_hsu_802701@@@@yahoo.com
> http://www.jasonhsu.com/ham_radio-technical.html

2319. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 19:16:42 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <uKV+kSCaM4m8Ew95@jmwa.demon.co.uk>
Source record: 45410
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

I read in sci.electronics.design that Smith-Gaspard
<jsmith52@tampabay.rr.com> wrote (in <3C9B5BD2.D7B7B745@tampabay.rr.com>
) about 'Unbuild Heathkit SB102 Transcievers?', on Fri, 22 Mar 2002:
>A HeathKit unbuilt Model AT-1 transmitter sold last year on
>eBay for USD $3870.00 ... I remember when it was sold for
>$39.95 new ... times have changed.

True, but the dollar devaluation has probably met the collectors'
cupidity half way. (;-)
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

2320. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 20:02:54 UTC
From: Melissa in Colorado <melissa@NODARNSPAMupalliance.org>
Message-ID: <Xns91D984C20421melissaNN0DARNSPAMup@206.124.0.13>
Source record: 45429
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

"xpyttl" <xpyttl_nospam@earthling.net> bestowed such eternal wisdom upon
us by saying from news:u9mip588lhsm53@corp.supernews.com:

> OK, the K2 I believe is now available with the 100W option.
>
> As far as I can tell, none of the kits have all the features of the rice
> boxes, depending on what features you care about.

I'm personally just interested in a nice stable multimode rig (except
maybe CW which I think is obsolete anyway and should no longer be required
for licensing) with a digital readout and perhaps a spectrum display, that
will cover all bands. SWL bands would be nice too, and if I could afford
one, it would also have complete receiver coverage from 100Hz to maybe 1 or
2 GHz. I may need a rice box for all that, I don't know. But if I start
wishing and fantasizing, there it goes, from an SB102 to all that. :)

> The K2 trades off
> some of the frills of the mid range commercial rigs to get top of the
> line receiver performance. There are a number of K2 features not found
> in the commercial rigs, but they tend to be features of interest to
> QRPers. A fully decked-out K2 is comparable in price to a mid-range
> commercial rig. The receiver specs are more comparable to a Japanese
> rig three times the price.

Hmm.

> (oh yeah, the obvious URL http://www.elecraft.com, also see the reviews
> at the Adventure Radio Society site and QST. ARS has some nice
> comparative data).

Single conversion?

> I happen to have a K1, which is a much more limited rig than the K2 (and
> a much more limited price!) What struck me is the ergonomics. The rig
> is much better laid out than my Icom. In spite of being a low-end rig,
> the thing is a joy to use.

10 watts?

> It's a little hard to get objective feedback on the K2. People who have
> them are absolutely rabid about the things. I would suggest finding
> someone who has one and playing with it a bit. In my opinion, it's a
> nice rig, and I have played with a couple. But you're not going to
> learn anything from talking to someone who has one ... they are all
> blinded by the Elecraft mojo.

Hm.. ok.

--
- Melissa
Somewhere in Colorado

2321. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 20:05:56 UTC
From: Melissa in Colorado <melissa@NODARNSPAMupalliance.org>
Message-ID: <Xns91D98545EB476melissaNN0DARNSPAMup@206.124.0.13>
Source record: 45430
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

Smith-Gaspard <jsmith52@tampabay.rr.com> bestowed such eternal wisdom
upon us by saying from news:3C9B5AEB.B5C7997D@tampabay.rr.com:

> Why don't you correct your Radio Amateur's call letter?

Huh?

>> - Melissa
>> KW0WW
>> Somewhere in Colorado

2322. FS - Semi. Devices

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 21:17:58 UTC
From: Byron Tatum <bjtatum@ev1.net>
Message-ID: <3c9b9ef8_1@newsa.ev1.net>
Source record: 45411

Hello - Have for sale these parts :
Mini-Circuits MAR-1 MMIC's in sealed bubble packs, have around 7 strips
to sell. Each strip is 10 MMIC's and cost is 17.50 per strip of 10.
Philips Dual Gate MOSFET device BF-980, this is a low noise VHF-UHF DG
MOSFET in the "X" package. These are very handy and supplies are drying up,
stock up now. These are NOS in static bags.
Pkg. of 50, 3 to sell at 35.00 each
Pkg. of 25, 4 to sell at 20.00 each

Thanks, WA5THJ.

2323. Re: Radiation from monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-22 22:27:46 UTC
From: AB Brown <abbrown@nospammail.com>
Message-ID: <a7gbenemj1@slb4.atl.mindspring.net>
Source record: 45412

For what it's worth, I've been studying low level radiation sources for years. As for computer or television CRT's, most of the x-radiation used to come from the high voltage regulation circuits (flyback circuits), which used vacuum tube diodes/ regulators. Since these vacuum tube circuits would operate with up to 40 Kv sources, weak x-rays could be produced that could easily penetrate the tv chassis and cabinet. People sitting near the tv would be exposed over long periods of time. However, the time period we're talking about here is the 1970's and earlier sets, before stricter regulations were in effect.

In my x-radiation detection experiments of early (pre-1980's) CRT's, the only way I could detect x-rays was with a scintillation counter especially made for x-ray detection. Even then, radiation levels produced were just barely above background. CRT's obviously did produce some x-rays, but the real danger lied in the tv flyback circuits described above.

I'd say that greater than 99 percent of todays CRT's, both television and computer type, use solid state flyback circuits. Instead of a tube regulation circuit, transistors are used thereby eliminating x-ray production from these circuits. The CRT's often use lead glass and filter out all but the weakest rays, which wouldn't even penetrate the skin anyway. That's not to say that a malfunction in the voltage feeding the CRT wouldn't possibly increase x-ray production as it could, but the possibility is very remote.

Using film as you have is one of the best, and cheapest, ways to detect x-rays. However, if you really want to know your exposure, a program of dosimetery is better. You wear a special badge anytime you're near the CRT, or whatever device you suspect, and every quarter (3 months), you mail off the badge to a firm that uses special instrumentation to determine how much radiation you've received. A dosimetery program is very good for determining exposure received, but it is also very expensive.

One must remember that x-rays are simply electromagnetic radiation, just like radio waves but of a much shorter wavelength. They are really low energy gamma rays. They can damage biological organisms just like other forms of radiation. When exposed to high levels, the damage shows up in a short period of time i.e. radiation sickness. Then there are delayed effects, those that don't appear for years after exposure, like cancer. These delayed effects usually result from lower exposures over a much longer period of time i.e. sleeping next to a wall covered with uranium glazed pottery for 50 years.

Over the millenia, the human body has developed certain defense mechanisms for radiation. The level of protection depends on health, genetics, and environment to name just a few.

So, would I be concerned with the radiation coming from my monitor? Yes, if tests revealed abnormal operation and large amounts of x-radiation being released. No, if the monitor was operating within normal limits and I used common sense to avoid excessive exposure, like maintaining a safe distance for one.

I know I've gone a little overboard here, but I hope you find this information useful.

AB Brown

"Bozidar Pasaric" <bpasaric@mac.com> wrote in message news:rhbys2.1x5lusy1xf6cg0N%bpasaric@mac.com...
> I have made the following experiment: I took a PC monitor and switched
> it on. Then I took a new ordinary colour negative film. I went into a
> dark room and pulled out one half of it. The first half remained in its
> tin can, and I put the second half into its black plastic box. So the
> first half of the negative was protected by a tin box, and the second
> half was protected from light by a strong black plastic box. Then I
> stuck both the halves onto the middle of the monitor screen with some
> adhesive tape, and left it there for four hours. After that time I had
> both the halves developed. The first half from the tin box was
> completely transperent, i.e. unexposed, while the second one from the
> plastic box was completely black, i.e. exposed. Exposed to what?
> Obviously X-rays!!! I repeated this experiment with several other
> types of monitors, but the result was always the same.
>
> Factories never give any data of the X-radiation of their screens. How
> strong is it? Some people sit by the screen for 8 hours a day, 250
> workdays a year - year after year. How dangerous is it? Does anyone
> know something more about it? Why don't factories pulbish that
> radiation in radiation units? Any comments?
>
> Bozidar, 9A2HL

2324. Best Crystals for Pulling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-23 02:13:53 UTC
From: w.harbourjr@worldnet.att.net
Message-ID: <deafe3d9.0203221813.24151f78@posting.google.com>
Source record: 45414

What are the crystals that allow the greatest frequency pulling?
HC-49, HC-33
and HC-6 are some of the xtal types I see for ordering. Any of those
better than the others??

Thanks,

Bill
KD4PWB

2325. Re: Best Crystals for Pulling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-23 02:21:14 UTC
From: la8ak.xnd@online.no
Message-ID: <3c9be5b1.64339553@news.online.no>
Source record: 45415

On 22 Mar 2002 18:13:53 -0800, w.harbourjr@worldnet.att.net (Bill Harbour) wrote:

>What are the crystals that allow the greatest frequency pulling?
>HC-49, HC-33
>and HC-6 are some of the xtal types I see for ordering. Any of those
>better than the others??
>
>Thanks,
>
>Bill
>KD4PWB

Old HC6/U and FT-243 types are supposed to be best for series mode pull, while computer type and colour burst xtals seems to give best results for parallel mode, you may also specify 'rubber type' xtals which are used for frequency modulation on 9, 10.7MHz or other

73
LA8AK
--
remove ,xnd to reply

2326. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-23 03:32:53 UTC
From: legg@magma.ca
Message-ID: <e715b5cc.0203221932.4f5c4622@posting.google.com>
Source record: 45416
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

```
>
> BTW, it sounds interesting, but I'm not really into QRP. Is anyone making a
> full featured all band HF transceiver kit that puts out full power? ( like
> 100-200 watts PEP out? )

At 100W, more like QRM.

or QNM

RL
```

2327. Re: Wideband Amp Tests

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-23 09:11:47 UTC
From: motsteve@mediaone.net
Message-ID: <motsteve-2303020414510001@c-66-176-88-250.se.client2.attbi.com>
Source record: 45417

In article <a0il9ushqhs1rlpsmqk3rm9l7apej3i6r4@4ax.com>, Paul Keinanen
<keinanen@sci.fi> wrote:

> On Thu, 21 Mar 2002 08:50:57 -0500, Ralph Mowery
> <rmowery@dialpoint.net> wrote:
>
> >While it is nice to play with circuits do you have any idea how it will
> >compair to one of the MMICS ? Something like a mar6.
>
> MAR-6 is the worst device for HF preamplification, unless you have a
> very narrow front end. The gain is very high and output very low, so
> it will saturate at quite low input levels. It is however, very usable
> for LF/MF indoor loops, which are quite selective but produce a very
> low output.
>
> However, MMICs like MAV-11 have output power and output IP3 points a
> few dBs below those of the 1989 RF Design specifications with similar
> gain figures.
>
> If you are going to wind transformers, why not put two MAV-11s in push
> pull and get similar specifications as the 1989 design.
>
> Paul OH3LWR
>

This is very good suggestion from Paul. You would also reduce even order
effects.

Steve WB4CZR

2328. Re: Help convert 14Mhz RF amp 7Mhz pse

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-23 14:09:14 UTC
From: Rodney Green <rodagreen@bigpond.com>
Message-ID: <o30n8.18239$uR5.42633@newsfeeds.bigpond.com>
Source record: 45418

Mike, this is an easy one. You need to simply scale the folloeing components.L3, L4, L5, The 200pF and the 450pF caps.

To go from 14 to 7mHz you must have the same reactance of these components at 7MHz as they now do at 14MHz. OK this means doubling the value of L3, L4, and L5. You also need to do the same for the same thing with the capacitors mentioned above. I am assuming that the rest of the amplifier is broad banded and that the reactances of the transformers is sufficient at 7MHz. ther is no way i can varify this from your circuit. I would just assume it is OK. You can always ask for help again if required later.

Regards from Rod Green VK6KRG

2329. Re: Radiation from monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-23 14:39:19 UTC
From: bpasaric@mac.com
Message-ID: <1f9i8qa.1755ua01jfcqcN%bpasaric@mac.com>
Source record: 45439

AB Brown wrote:

So, would I be concerned with the radiation coming from my monitor?
Yes, if > tests revealed abnormal operation and large amounts of
x-radiation being > released. No, if the monitor was operating within
normal limits and I used common sense to avoid excessive exposure,
like maintaining a safe distance for one. I know I've gone a little
overboard here, but I hope you find this
information useful.

Dear AB Brown (and all others who took part in this topic),

No, you haven't gone too far - I think that the topic deserves a
complete analysis. Your post has been most informative for me. Thanks.
Now, several answers on this news group have persuaded me that the
danger of monitor radiation is not very great, but it still exists.
Another post said that LCD screens are coming as a definite solution.
But that process is very slow. Anyhow, I have learned something more.
Thank you.

Bozidar, 9A2HL

2330. Re: Help convert 14Mhz RF amp 7Mhz pse

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-23 14:40:10 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3c9c9352.286146@news.freeserve.net>
Source record: 45419

Thanks Rod. I can find my way around Valve PA's but transistors are a
mystery to me. With the devices costing $20 each I really don't want
to kill them.
atb Mike W
--
On Sat, 23 Mar 2002 22:09:14 +0800, "Rodney Green"
<rodagreen@bigpond.com> wrote:

>Mike, this is an easy one. You need to simply scale the folloeing
>components.L3, L4, L5, The 200pF and the 450pF caps.
>
>To go from 14 to 7mHz you must have the same reactance of these components
>at 7MHz as they now do at 14MHz. OK this means doubling the value of L3, L4,
>and L5. You also need to do the same for the same thing with the capacitors
>mentioned above. I am assuming that the rest of the amplifier is broad
>banded and that the reactances of the transformers is sufficient at 7MHz.
>ther is no way i can varify this from your circuit. I would just assume it
>is OK. You can always ask for help again if required later.
>
>Regards from Rod Green VK6KRG
>
>

2331. Re: Help convert 14Mhz RF amp 7Mhz pse

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-23 15:17:53 UTC
From: Bill & Suzie Whatley <spud286@attbi.com>
Message-ID: <B01n8.94585$Yv2.30555@rwcrnsc54>
Source record: 45420

Just another item to look at....

In addition to scaling the matching network components, you need to examine
any
bypass or blocking components (bypass caps, RF chokes, etc) used in the
circuit.

The values used may be inadequate for 7 Mhz operation and if so, they would
need to be scaled for the new frequency of operation also.

73
WA5VRL
Willis

2332. PCB Layout Software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-23 15:19:45 UTC
From: Dan Richardson <k6mhe@arrl.net>
Message-ID: <sr6p9u86ul9489ld22gu03nbkdjj8rr6ht@4ax.com>
Source record: 45421

I'm trying to find a *simple* layout program for making some simple printed circuit boards. Nothing real advanced I just want to make a small board with a couple of transistors and a few resistors, capacitors and the like. Don't want or need all the fancy stuff like auto routing and etc.

Any suggestions.

Thanks
Danny, K6MHE

2333. Re: PCB Layout Software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-23 17:48:11 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <u9pfuqhjfgeh97@corp.supernews.com>
Source record: 45422

www.circuitmaker.com has a student version for download. The actual "professional" program is quite buggy if you plan on doing complex boards, but for simple stuff it is the one I use to teach freshman engineering students the techniques.

Jim

"Dan Richardson" <k6mhe@arrl.net> wrote in message news:sr6p9u86ul9489ld22gu03nbkdjj8rr6ht@4ax.com...
> I'm trying to find a *simple* layout program for making some simple
> printed circuit boards. Nothing real advanced I just want to make a
> small board with a couple of transistors and a few resistors,
> capacitors and the like. Don't want or need all the fancy stuff like
> auto routing and etc.
>
> Any suggestions.
>
> Thanks
> Danny, K6MHE
>

2334. Re: PCB Layout Software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-23 19:02:13 UTC
From: "john.bean1" <john.bean1@ntlworld.com>
Message-ID: <Ei4n8.4639$km3.733607@news2-win.server.ntlworld.com>
Source record: 45423

I have tried the Circuitmaker student version, which I have found to be one of the best, but unfortunately it does not include a " simple layout program", at least the one I downloaded. There is a so called "demo" version that can be used for a month that has the autrouter included, but I have found it not to be of much use for simple circuits, it's great for complex circuits. Ideally a stand-alone router or layout program would be what I would be most interested in using.

Regards

John

"Jim Weir" <jim@rst-engr.com> wrote in message
news:u9pfuqhjfgeh97@corp.supernews.com...
> www.circuitmaker.com has a student version for download. The actual
> "professional" program is quite buggy if you plan on doing complex boards,
> but for simple stuff it is the one I use to teach freshman engineering
> students the techniques.
>
> Jim
>
>
>
> "Dan Richardson" <k6mhe@arrl.net> wrote in message
> news:sr6p9u86ul9489ld22gu03nbkdjj8rr6ht@4ax.com...
> > I'm trying to find a *simple* layout program for making some simple
> > printed circuit boards. Nothing real advanced I just want to make a
> > small board with a couple of transistors and a few resistors,
> > capacitors and the like. Don't want or need all the fancy stuff like
> > auto routing and etc.
> >
> > Any suggestions.
> >
> > Thanks
> > Danny, K6MHE
> >
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.338 / Virus Database: 189 - Release Date: 14/03/2002

2335. WTB: HT-46 PARTS RIG

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-23 23:22:08 UTC
From: Joe Hargis <joehargis@worldnet.att.net>
Message-ID: <A68n8.2595$se.253683@bgtnsc04-news.ops.worldnet.att.net>
Source record: 45424

Need HT-46 FL-1 filter-will buy parts radio to get, Joe in MO

2336. Arcuturus Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-23 23:49:41 UTC
From: "Robert S. Bartel" <bobb@ulster.net>
Message-ID: <3C9D1671.127DE34B@ulster.net>
Source record: 45425

Other then being blue, what was special about the arcuturus tubes of the 20's ?

2337. Sizing blowers for external anode tubes (anyone good with fluid mechanics?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-24 00:08:17 UTC
From: tongaloa <tongaloa@alltel.net>
Message-ID: <a7j5di$2na$1@iac5.navix.net>
Source record: 45426

I've a surplus Soviet Military vacuum tube.
It requires forced air cooling of 40 m**3/hour
(I'm assuming this is at STP so 52kg/hour and
specific heat capacity is about 1000 J/deg K)
in order to remove 350W from the heat exchanger.
The 18 'holes' in the heat exchanger have a cross section
totaling 200 mm**3

Here are some drawings of the tube/valve.
http://www.nd2x.net/gi7b.html
these are radial view.
If one makes an axial view there are
18 little pie slices (triangles) and the area of these
sums to 200 mm**2

40 m**3 per hour is 200 km/h of uncompressed axial flow!
As an aside, I'd be curious as to how much noise to expect...

Blowers are specified in terms of volume for a given
back pressure. i.e. 40 m**3 at 5 cm(water)
So, what I need to know is...
How the heck do I figure out the pressure drop
in squeezing 40 m**3 per hour of air through this thing.

I'll be sizing the blower to work wt 100 degrees F ambient at sea level.

-bob

2338. Bandswitch & Tune Cap For Sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-24 00:44:01 UTC
From: Jeff Weinberg W8CQ <w8cqjeff@tds.net>
Message-ID: <lj9n8.19578$IN3.6444288@kent.svc.tds.net>
Source record: 45427
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Hi All,
I have the following for sale:

1 - Multitech Industries Model 86A Custom Bandswitch. This is a switch I had made for an amp project and no longer need it. It was never used or soldered on. It is very similar to the nice switches in the QRO and Commander amplifiers. It has 2 sections (1 for tank/tune cap padder switching, the other for load cap padder switching). It is set up for 160-10 meter operation. A technical drawing of the switch is also listed in the links. I have over $200 in the switch. I would sell it for $150, shipping included.

Pictures and the tech sheet can be seen at the following links:
http://www.harbachelectronics.com/forsale/switch1.jpg
http://www.harbachelectronics.com/forsale/switch2.jpg
http://www.harbachelectronics.com/forsale/switchdwg.jpg

1- EF Johnson Tune Capacitor. Specs are ~240pF at 7KV (0.175" plate spacing). The cap is used, but does not have arc marks or burns. The dimensions are approximately 12" long x 5" wide x 5" tall. This would make a great tune cap for a homebrew. I would like $40 for it, shipping included.

A picture of the capacitor is at:
http://www.harbachelectronics.com/forsale/tunecap.jpg

--
Jeff Weinberg W8CQ
Harbach Electronics
(317) 892-2641
harbachelectronics@tds.net
http://www.harbachelectronics.com

2339. Re: Sizing blowers for external anode tubes (anyone good with fluid mechanics?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-24 00:56:00 UTC
From: john graesser <graesser@tca.net>
Message-ID: <u9q8uianj6m262@corp.supernews.com>
Source record: 45428

"tongaloa" <tongaloa@alltel.net> wrote in message
news:a7j5di$2na$1@iac5.navix.net...
> 40 m**3 per hour is 200 km/h of uncompressed axial flow!
> As an aside, I'd be curious as to how much noise to expect...

It appears you are confusing cubic meters of air with velocity.

A cubic meter is approx 35 cubic feet, so that is something like 1400 cubic feet per hour of air flow, which is fairly slow air exchange.

I just looked at industrial blowers on the web and they were speced at 28-4600 cmm, that is per minute, your spec is .66cmm.
thanks, John.
KC5DWD

2340. MGF 1502 GaAs Fet

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-24 03:29:08 UTC
From: Scheveneels <kscheveneels@planetinternet.be>
Message-ID: <a7jh6eefo1@reader10.wxs.nl>
Source record: 45431

Hello , I am looking for a datasheet for the MGF 1502 GaAs Fet .
It was used for a 2 meter preamplifier, but I can't seem to find
any datasheets of it on the internet .

Can anyone please send me the datasheet ?
please send to : on1dre@qsl.net

Thanks in advance !

73' de Kevin , ON1DRE

2341. Re: PCB Layout Software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-24 05:51:11 UTC
From: budgie <budgie@nowhere.cantech.net.au>
Message-ID: <3c9d68e5.2902319@news.cantech.net.au>
Source record: 45433

On Sat, 23 Mar 2002 07:19:45 -0800, Dan Richardson <k6mhe@arrl.net>
wrote:

>I'm trying to find a *simple* layout program for making some simple
>printed circuit boards. Nothing real advanced I just want to make a
>small board with a couple of transistors and a few resistors,
>capacitors and the like. Don't want or need all the fancy stuff like
>auto routing and etc.
>
>Any suggestions.

EasyTrax by Protel is freeware nowadays, soemtimes now referred to as
EasyFree. You can d/l it from a number of sites, and Protel had it on
their site last time I looked. No autorouting, but I've yet to see a
<$5K autorouter worth a cracker either at RF or audio frequencies.

2342. New GU74B / 4CX800 Tube and New Socket $75.00

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-24 06:50:54 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <u9qif8hbbucac6@corp.supernews.com>
Source record: 45432
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

I actually have three set of these and some single tubes if someone
just needs a tube or two for spares. Everything is unused. I have one of
these running in my Dentron MLA-2500 amplifier.

N.O.S. Russian GU74B / 4CX800 and matching socket $75.00 plus
shipping from zip 28751. Three pairs of these are available.

Tubes in single lots are $40.00 plus shipping.
I also have new Stancor filament transformers available if you want to
put one or more in the deal.

Doug,
snowden@peoplepc.com

N4IJ

2343. Re: PCB Layout Software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-24 06:53:57 UTC
From: Whiskerstherat <mevans@tm.net>
Message-ID: <3C9DA162.D34FCAD4@tm.net>
Source record: 45434

I would try Eagle. It is free, and has no limitations, except:

1: The board size
2: 2 layers.

Other than that, it is fully functional, and has auto route capability,
and they have just came out with an updated version.

Whiskerstherat

Dan Richardson wrote:

> I'm trying to find a *simple* layout program for making some simple
> printed circuit boards. Nothing real advanced I just want to make a
> small board with a couple of transistors and a few resistors,
> capacitors and the like. Don't want or need all the fancy stuff like
> auto routing and etc.
>
> Any suggestions.
>
> Thanks
> Danny, K6MHE

2344. Re: PCB Layout Software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-24 07:15:56 UTC
From: Michael Wuensche <dl8fbh@dl8fbh.ampr.org>
Message-ID: <a7jufc$m5c$1@dl8fbh.ampr.org>
Source record: 45435

Dan Richardson <k6mhe@arrl.net> wrote:

> I'm trying to find a *simple* layout program for making some simple
> printed circuit boards. Nothing real advanced I just want to make a
> small board with a couple of transistors and a few resistors,
> capacitors and the like. Don't want or need all the fancy stuff like
> auto routing and etc.

Look for pia. Last version I know of is pia22b.

Michael

2345. Re: Sizing blowers for external anode tubes (anyone good with fluid mechanics?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-24 08:40:51 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <rm1r9ukk41uouu748jhck0sbpqh9vfp2la@4ax.com>
Source record: 45436

On Sat, 23 Mar 2002 19:08:17 -0500, "tongaloa" <tongaloa@alltel.net>
wrote:

>
>I've a surplus Soviet Military vacuum tube.
>It requires forced air cooling of 40 m**3/hour
>(I'm assuming this is at STP so 52kg/hour and
>specific heat capacity is about 1000 J/deg K)
>in order to remove 350W from the heat exchanger.

What is the maximum allowed heat exchanger temperature ?

It appears that you are using 25 K as the air temperature increase to
remove 350 W of power (0.0144 kg/s * 1 KJ/kg/K * 25 K = 0.36 kW).

A 25 K temperature increase sounds about right for a germanium power
transistor :-), but for a tube amplifier with 40 C inlet temperature,
a 140 C (or more) outlet temperature sounds more likely, corresponding
to a 100 K temperature increase and thus, a required air flow of 10
m**3/hour (or less).

Paul OH3LWR

2346. FS: RS 242 Antique German power triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-24 12:45:07 UTC
From: arnoldg@c2i.net
Message-ID: <3c9dcacc.15613934@news1.c2i.net>
Source record: 45437

Hello,

I have several of this antique globe shape German triode in stock. It is directly heated, an European 4-pin base and about 12W anode dissipation. The heater is 3.8V 0.72A, u=17, S = 3.0mA/V Max. anode voltage is 400V.The valves are NOS, but the boxes are mostly in bad shape. Pictures are available by e-mail.
Please contact me if you are interested.

Regards,

Arnold Goks yr

DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267
http://www.demostenes.no

Thousands of different valves in stock as well as sockets,transformers,books,caps,resistors and other components. Web site is updated every week. You can order on-line.

2347. Arnoud's Museum of Tek Scopes now on my website

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-24 14:02:21 UTC
From: Phil T <phil@vaxxine.com>
Message-ID: <3C9DDC6D.2072235@vaxxine.com>
Source record: 45438

Gents,

As the subject says, Arnoud van der Wel's original Museum of Tek Scopes
is now hosted at my web site :

http://www.vaxxine.com/phil/scopes/test.htm

Let me know if you have any suggestions for improvement.

Thanks

Phil

2348. Re: PCB Layout Software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-24 15:11:12 UTC
From: Ake <non@telia.com>
Message-ID: <k0mn8.27130$n4.5366046@newsc.telia.net>
Source record: 45440

Sprint-Layout is a simple tool to create layouts for single-sided and
double-sided PCBs (Printed Circuit Boards).

http://www.abacom-online.de/UK/html/sprint.html

Ake

"Dan Richardson" <k6mhe@arrl.net> skrev i meddelandet
news:sr6p9u86ul9489ld22gu03nbkdjj8rr6ht@4ax.com...
> I'm trying to find a *simple* layout program for making some simple
> printed circuit boards. Nothing real advanced I just want to make a
> small board with a couple of transistors and a few resistors,
> capacitors and the like. Don't want or need all the fancy stuff like
> auto routing and etc.
>
> Any suggestions.
>
> Thanks
> Danny, K6MHE
>

2349. Re: Sizing blowers for external anode tubes (anyone good with fluid mechanics?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-24 16:43:41 UTC
From: tongaloa <tongaloa@alltel.net>
Message-ID: <a7kvo0$65j$1@iac5.navix.net>
Source record: 45441

Paul-
This is useful.
The max seal temp is 200C
The manufacturer states 40m**3/hour for 350W.
I did a calc of the outlet temperature based on the
mass flow and the specific heat capacity of air at STP.
This doesn't tell me the temp difference between the
air and the heat exchanger. The heat exchanger is rather
small.

-bob

"Paul Keinanen" <keinanen@sci.fi> wrote in message
news:rm1r9ukk41uouu748jhck0sbpqh9vfp2la@4ax.com...
> On Sat, 23 Mar 2002 19:08:17 -0500, "tongaloa" <tongaloa@alltel.net>
> wrote:
>
> > >
> What is the maximum allowed heat exchanger temperature ?
>
> It appears that you are using 25 K as the air temperature increase to
> remove 350 W of power (0.0144 kg/s * 1 KJ/kg/K * 25 K = 0.36 kW).
>
> A 25 K temperature increase sounds about right for a germanium power
> transistor :-), but for a tube amplifier with 40 C inlet temperature,
> a 140 C (or more) outlet temperature sounds more likely, corresponding
> to a 100 K temperature increase and thus, a required air flow of 10
> m**3/hour (or less).
>
> Paul OH3LWR
>

2350. F_S Vacuum Variable

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-24 16:45:05 UTC
From: jackgxyz@one.net
Message-ID: <u9s0kj2d2g5k61@corp.supernews.com>
Source record: 45442

Hi,

I have a Jennings vacuum variable capacitor for sale.
The capacitor is a UCSX 1000, which is a 25-1000 pf 15kv
vacuum variable. The cap has the puller with a .5" shaft diameter.

The prices is $70 plus shipping. I can email a picture of the
cap if interested.

Please remove the xyz from my email address if you care to respond.

Thanks,

Jack

2351. Re: Sizing blowers for external anode tubes (anyone good with fluid mechanics?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-24 17:09:53 UTC
From: tongaloa <tongaloa@alltel.net>
Message-ID: <a7l194$7dr$1@iac5.navix.net>
Source record: 45443

My math is correct(see near end),
but that's not the point.

I need the back pressure or head
if I'm to size a blower.

Flow is resisted by a pressure increase. Pressure increase
is a result of the force required to overcome the friction
of the heat exchanger plus the increase that results from
heat conducted from the exchanger.

Blowers are specified in volume/(unit time * head).
So I have to know the head in order to choose a blower.

-bob

If I'm sending 40m**3 through a 200mm**2
hole and assume no compression, then
40m**3 per hour/0.0002m**2 cross section
gives 200000m/hour... (200km/hour)
In feet:
40m**3=24CFM
200mm**2=0.31in**2 or 0.00215ft**2
result is 11148 fpm = 2.1mpm = 127mph

"john graesser" <graesser@tca.net> wrote in message
news:u9q8uianj6m262@corp.supernews.com...
>
> "tongaloa" <tongaloa@alltel.net> wrote in message
> news:a7j5di$2na$1@iac5.navix.net...
> > 40 m**3 per hour is 200 km/h of uncompressed axial flow!
> > As an aside, I'd be curious as to how much noise to expect...
>
> It appears you are confusing cubic meters of air with velocity.
>
> A cubic meter is approx 35 cubic feet, so that is something like 1400
cubic
> feet per hour of air flow, which is fairly slow air exchange.
>
> I just looked at industrial blowers on the web and they were speced at
> 28-4600 cmm, that is per minute, your spec is .66cmm.
> thanks, John.
> KC5DWD
>
>

>

2352. Re: PCB Layout Software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-24 17:50:47 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <Xlon8.4080$se.378044@bgtnsc04-news.ops.worldnet.att.net>
Source record: 45444

PIA is a very good program. It is similar in feel to the 25000 dolar
autorouters from Racal-Redac.

Pete KE9OA

Michael Wuensche <dl8fbh@dl8fbh.ampr.org> wrote in message
news:a7jufc$m5c$1@dl8fbh.ampr.org...
> Dan Richardson <k6mhe@arrl.net> wrote:
>
> > I'm trying to find a *simple* layout program for making some simple
> > printed circuit boards. Nothing real advanced I just want to make a
> > small board with a couple of transistors and a few resistors,
> > capacitors and the like. Don't want or need all the fancy stuff like
> > auto routing and etc.
>
> Look for pia. Last version I know of is pia22b.
>
>
> Michael

2353. Re: Radiation from monitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-24 17:57:08 UTC
From: AB Brown <abbrown@nospammail.com>
Message-ID: <a7l493$2l9$1@slb4.atl.mindspring.net>
Source record: 45445

Bozidar, you're welcome. The earlier post was correct about LCD monitors, they will not produce x-rays. Why?

Because, in order for x-rays to be produced, two things must be present: high voltage, on the order of at least 10 Kv, and high vacuum. Most vacuum tubes used in radio service have the high vacuum needed, but are seldom operated above 5 Kv, so no x-rays are produced. Many CRT tubes though operate at higher voltages, many times exceeding 10 Kv, so weak x-rays might be produced, especially in thin or non-leaded CRT tubes. Like I mentioned yesterday, there are much stricter regulations these days compared to 20+ years ago, so x-ray production, if any, would be barely discernable. The main hazard was in the flyback circuits that used tubes, many times being operated near 40 Kv. Today's are almost all solid state.

With LCD screens, there is neither high voltage nor high vacuum present so x-rays cannot be produced. LCD's use a completely different way of generating motion pictures than CRT's. In fact, I think that, once the technology is perfected, you'll see the near end of the CRT in the coming years. I say "near end" because there will still be certain applications where only a CRT can be used.

It is interesting to note that since x-rays are electromagnetic, just like radio and light waves, it would be possible to use them for communication purposes if one so desired. However, the harm greatly outweighs the benefits here, so I don't think anyone has tried it.

AB

> Dear AB Brown (and all others who took part in this topic),
>
> No, you haven't gone too far - I think that the topic deserves a
> complete analysis. Your post has been most informative for me. Thanks.
> Now, several answers on this news group have persuaded me that the
> danger of monitor radiation is not very great, but it still exists.
> Another post said that LCD screens are coming as a definite solution.
> But that process is very slow. Anyhow, I have learned something more.
> Thank you.
>
> Bozidar, 9A2HL
>

2354. Re: Sizing blowers for external anode tubes (anyone good with fluid mechanics?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-24 20:24:26 UTC
From: tongaloa <tongaloa@alltel.net>
Message-ID: <a7lclu$dk2$1@iac5.navix.net>
Source record: 45446

Paul-

I went back and looked at the operating parameters for the
tube/valve and the ambient temp range extends to 100C
with a maximum relative humidity of 98% at 40degrees C.

If the 40m**3 is specified at 100C then the density is 1kg/m**3 (77%),
the rate is 0.0111 kg/s, making the temp rise 31.5C and exit 131.5C
which is close to your 140C

I really don't have a feel for these numbers....

So, it looks like with 40 degree and 98% air humidity ambient
which is also about 1kg/m**3 Bottom line, I can reduce the
mass flow by 1/3 and my rise will be about 100C

I don't know the pressure drop squeezing 13m**2 through,
any more than I know it for 40m**3.
I've still got the problem of sizing the blower!!!
It is sounding smaller and less expensive.
With the velocity in the orifice down to 70km/hour
as a worst case, it will definitely be quieter as well.

-bob

"Paul Keinanen" <keinanen@sci.fi> wrote in message
news:rm1r9ukk41uouu748jhck0sbpqh9vfp2la@4ax.com...
> On Sat, 23 Mar 2002 19:08:17 -0500, "tongaloa" <tongaloa@alltel.net>
> wrote:
>
> >
> >I've a surplus Soviet Military vacuum tube.
> >It requires forced air cooling of 40 m**3/hour
> >(I'm assuming this is at STP so 52kg/hour and
> >specific heat capacity is about 1000 J/deg K)
> >in order to remove 350W from the heat exchanger.
>
> What is the maximum allowed heat exchanger temperature ?
>
> It appears that you are using 25 K as the air temperature increase to
> remove 350 W of power (0.0144 kg/s * 1 KJ/kg/K * 25 K = 0.36 kW).
>
> A 25 K temperature increase sounds about right for a germanium power
> transistor :-), but for a tube amplifier with 40 C inlet temperature,
> a 140 C (or more) outlet temperature sounds more likely, corresponding

> to a 100 K temperature increase and thus, a required air flow of 10
> m**3/hour (or less).
>
> Paul OH3LWR
>

2355. Re: PCB Layout Software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-24 20:51:43 UTC
From: NoBody <NotHere@NoWhere.Net>
Message-ID: <3C9E3AFD.95A03730@NoWhere.Net>
Source record: 45297

Take a look here.
http://www.cia.com.au/rcsradio/index2.htm
Reasonably powerful and nowhere near the learning curve ......

Ted
KD4EE

Dan Richardson wrote:

> I'm trying to find a *simple* layout program for making some simple
> printed circuit boards. Nothing real advanced I just want to make a
> small board with a couple of transistors and a few resistors,
> capacitors and the like. Don't want or need all the fancy stuff like
> auto routing and etc.
>
> Any suggestions.
>
> Thanks
> Danny, K6MHE

2356. Re: PCB Layout Software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-25 02:13:29 UTC
From: budgie <budgie@nowhere.cantech.net.au>
Message-ID: <3c9e87a9.1758751@news.cantech.net.au>
Source record: 45298

On Sun, 24 Mar 2002 20:51:43 GMT, NoBody <NotHere@NoWhere.Net> wrote:

>Take a look here.
>http://www.cia.com.au/rcsradio/index2.htm
>Reasonably powerful and nowhere near the learning curve ......

Yes, EasyTrax - one of a number of d/l sites ...

2357. FS: FOUR(4) ARRL VINTAGE HANDBOOKS in SPANISH(Rare)1960's

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-25 03:27:16 UTC
From: rlucch2098@aol.com
Message-ID: <20020324222716.26401.00000624@mb-fp.aol.com>
Source record: 45299

Hi All;
I have these 4 ARRL handbooks that were printed in Spanish for the ARGENTINA
RADIO SOCIETY, like their ARRL I guess?
They are in Excellent cndition, Years are 1964, 66, 68, 69!
Exact copies of the English versions, Price is $50.00 Conus.
Picture>>
http://www.baltimorepress.com/~wa2rqy/4spanishbooks.jpg
Thanks es 73.....RICH-WA2RQY RLUCCH2098@aol.com
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

2358. Looking for that relaxing week-end project...I've got one...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-25 04:36:28 UTC
From: braincambre500@yahoo.com
Message-ID: <85a87c6c.0203242036.7d44977a@posting.google.com>
Source record: 45300

Hello all,

My name is Patrick Cambre and I live in New Iberia, La., USA.

I like to go to different forums and post of my new website that has a fascinating little project on it. I call it the Radio Shack Special.

I have gotten many an e-mail, since I have been posting it and a lot of
people love to make these small simple projects.

Introducing to you...the one transistor FM receiver!

The sensitivity, selectivity and great audio output is what you will get from this marvalous little jewel! In fact, Radio Shack is waiting for you...I have designed this so as to get ALL of the parts from there....no need to wait on a mail order company.

I could tell you all about it here....but if you go to my website and sit back and read...you will see the complete plans on it....

I do want to say thank you very much for taking the time to read this article.

The Radio Shack Special is at: http://braincambre500.freeservers.com

When you get there...also read what 'Pedro' has to say about it....he also
made one...

...a friend, Patrick

2359. FS: 4cx250's/sockets/chimneys

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-25 05:20:48 UTC
From: Steve Bauder <sbauder@wwt.net>
Message-ID: <3C9EB3AF.7475546E@wwt.net>
Source record: 45301

Two Eimac SK626 chimneys, two SK620A sockets, two plate clamps, and two 4CX250Bs (guaranteed full output). Also included are three 4CX250 pullouts removed from continuous commercial service. $150 takes it all, shipped CONUS.

Steve, nx9z

2360. ATU for magnetic loop antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-25 13:41:16 UTC
From: Fabio Morsani <fabio.morsani@pi.infn.it>
Message-ID: <3C9F28FC.D98F5DEC@pi.infn.it>
Source record: 45302

I developed an automatic tuner for my homebrew magnetic loop antenna.
It allows the user to directly enter the desired freq using a 4x4
keyboard, then the ATU tunes the loop at that freq for minimum SWR.
Alternatively (preferred), you can just press a key and the ATU reads
automatically the current RTX freq (for my TS130, it reads the local
oscillator freq and subtract the IF value) then performs the tuning.
More, the keyer and the mic pass through the ATU, which allows the
PTT (used for CW also) to be asserted to the RTX only if the current
SWR is below a programmed limit ... and other features.

I successfully used such a ATU for some years.
Recently I developed a serial interface to connect the ATU to
the CAT port of some commercial RTXs (ICOM, FT1000, TS850 ...).

I'd like to know if someone has built something of similar, his
experience, some ideas to improve it.

On my site http://dai5lhy.dadacasa.supereva.it/
you can find some info (for the moment in italian only).

73 Fabio - I5LHY

2361. Transistor substitutions needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-25 16:58:56 UTC
From: garbo <garbo@garbo.com>
Message-ID: <3C9F574F.219721E3@garbo.com>
Source record: 45303

URLs to online transistor substitution guides?

I found < http://www.ee.washington.edu/circuit_archive/parts/cross.html
> but it doesn't meet the requirement..

The requirement: What are these as 2N... part numbers? (The real
requirement: I want to go to RS and pick up reasonable facsimilies for
these - what are the RS part numbers?)

2SK19 Y
2SK19 GR
2SC373

Thanks!

2362. Re: Transistor substitutions needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-25 17:24:34 UTC
From: "Alexander S. Wood" <alec_wood@nospamplease.ntlworld.com>
Message-ID: <o4Jn8.21908$Dr3.2873009@news6-win.server.ntlworld.com>
Source record: 45304

go on the net and search for "Torbase". Its a very good transistor
substitute and data guide. In Dutch but that should not be a problem.

Alec M1BNK

"garbo" <garbo@garbo.com> wrote in message
news:3C9F574F.219721E3@garbo.com...
> URLs to online transistor substitution guides?
>
> I found < http://www.ee.washington.edu/circuit_archive/parts/cross.html
> > but it doesn't meet the requirement..
>
> The requirement: What are these as 2N... part numbers? (The real
> requirement: I want to go to RS and pick up reasonable facsimilies for
> these - what are the RS part numbers?)
>
> 2SK19 Y
> 2SK19 GR
> 2SC373
>
> Thanks!
>

2363. Re: Transistor substitutions needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-25 18:56:17 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <hsrn7a.rjm.ln@my.linux.box>
Source record: 45305

In article <3C9F574F.219721E3@garbo.com>, garbo wrote:
> URLs to online transistor substitution guides?
>
> I found < http://www.ee.washington.edu/circuit_archive/parts/cross.html
>> but it doesn't meet the requirement..
>
> The requirement: What are these as 2N... part numbers? (The real
> requirement: I want to go to RS and pick up reasonable facsimilies for
> these - what are the RS part numbers?)
>
> 2SK19 Y
> 2SK19 GR
> 2SC373
>
> Thanks!

I don't have data-sheets for either device but IIRC, the
2SK19 in an n-channel JFET and the 2SC373 is an NPN
transistor. Every amateur shack should have a stock
of general-purpose transistors.

Popular JFET's: 2N3819, MPF102, BF256......

Transistors NPN: BC548, 2N2222, PN2222.....

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.17

2364. RF Power Module Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-25 22:06:59 UTC
From: w.harbourjr@worldnet.att.net
Message-ID: <deafe3d9.0203251406.450a2744@posting.google.com>
Source record: 45306

I took a S-AU64 and a M67754 power module out of some old cellphones.
Can I use these for QRP HF work?? Anyone with any experience using
these? I'd also like to find datasheets for them.

Thx,

Bill
KD4PWB

2365. Re: RF Power Module Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-25 23:59:29 UTC
From: Rich Griffiths <richg@one.net>
Message-ID: <3C9FB9E1.9124DC53@one.net>
Source record: 45307

Bill:

I'm guessing that the S-AU64 is a Toshiba unit (?) The last time I looked, they had pretty good data sheets on the web. Try a search.

GL

... Rich W2RG

Bill Harbour wrote:
>
> I took a S-AU64 and a M67754 power module out of some old cellphones.
> Can I use these for QRP HF work?? Anyone with any experience using
> these? I'd also like to find datasheets for them.
>
> Thx,
>
> Bill
> KD4PWB

2366. Re: Transistor substitutions needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-26 07:54:01 UTC
From: John Fletcher <John@kanga.demon.co.uk>
Message-ID: <ajx$eCAZkCo8Ewol@kanga.demon.co.uk>
Source record: 45309

Towers lists BC184L and 2N3707 as substitutes for the 2SC373.

In article <3C9F574F.219721E3@garbo.com>, garbo <garbo@garbo.com> writes
>URLs to online transistor substitution guides?
>
>I found < http://www.ee.washington.edu/circuit_archive/parts/cross.html
>> but it doesn't meet the requirement..
>
>The requirement: What are these as 2N... part numbers? (The real
>requirement: I want to go to RS and pick up reasonable facsimilies for
>these - what are the RS part numbers?)
>
>2SK19 Y
>2SK19 GR
>2SC373
>
>Thanks!
>

--
John Fletcher

2367. Re: Best Crystals for Pulling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-26 08:23:22 UTC
From: n2cqr@clix.pt
Message-ID: <3ca02faa.15256899@news.clix.pt>
Source record: 45308

Also, tell the manufacturer that you want fundamental mode, AT cut.

On Sun, 24 Mar 2002 18:53:03 +1100, "Peter Parker"
<parkerp@alphalink.com.au> wrote:

>
>HC6/U are the best. FT-243 are difficult to shift far.
>
>Consider ordering two identical crystals. Having two in parallel increases
>pulling range by 50 - 200%.
>
>Peter VK3YE
>
>"J M Noeding" <la8ak.xnd@online.no> wrote in message
>news:3c9be5b1.64339553@news.online.no...
>> On 22 Mar 2002 18:13:53 -0800, w.harbourjr@worldnet.att.net (Bill
>> Harbour) wrote:
>>
>> >What are the crystals that allow the greatest frequency pulling?
>> >HC-49, HC-33
>> >and HC-6 are some of the xtal types I see for ordering. Any of those
>> >better than the others??
>> >
>> >Thanks,
>> >
>> >Bill
>> >KD4PWB
>>
>> Old HC6/U and FT-243 types are supposed to be best for series mode
>> pull, while computer type and colour burst xtals seems to give best
>> results for parallel mode, you may also specify 'rubber type' xtals
>> which are used for frequency modulation on 9, 10.7MHz or other
>>
>> 73
>> LA8AK
>> --
>> remove ,xnd to reply
>
>

73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 15.7 W
http://planeta.clix.pt/n2cqr

2368. Transistor switching circuit Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-26 11:21:46 UTC
From: skypilot1@blueyonder.co.uk
Message-ID: <3ca059d1.10541952@news.blueyonder.co.uk>
Source record: 45310

Thanks for reading this plea for help.
I am wanting a circuit to build a single transister switch to enable me to get a 5v out of my radio when i receive a signal,I would be gratefull for any sugestions.
Thanks in advance.
Bert G4NJI

Albert Corker
G4NJI---Rotherham,S/york's

2369. Re: RF Power Module Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-26 14:25:27 UTC
From: w.harbourjr@worldnet.att.net
Message-ID: <deafe3d9.0203260625.3d219606@posting.google.com>
Source record: 45311

I do believe the S-AU64 is a Toshiba unit but I've not had much luck
in finding a datasheet for it.

Tnx,

Bill

Rich Griffiths <richg@one.net> wrote in message news:<3C9FB9E1.9124DC53@one.net>...
> Bill:
>
> I'm guessing that the S-AU64 is a Toshiba unit (?) The last time I
> looked, they had pretty good data sheets on the web. Try a search.
>
> GL
>
> ... Rich W2RG
>
>
> Bill Harbour wrote:
> >
> > I took a S-AU64 and a M67754 power module out of some old cellphones.
> > Can I use these for QRP HF work?? Anyone with any experience using
> > these? I'd also like to find datasheets for them.
> >
> > Thx,
> >
> > Bill
> > KD4PWB

2370. Bidirectional current measurement

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-26 14:25:49 UTC
From: doug dotson <ddotson@digidata.com>
Message-ID: <Dv%n8.4909$T_.98772@iad-read.news.verio.net>
Source record: 45312

Greetings!

I am attempting to measure current using a 50mV shunt. The current can be moving in either direction. Clearly I can use an instrumentation amp with dual-rail power supply, but this would be the only need for a negative voltage in my system. Does anyone know of a cleaver way to do this using a single rail supply? A charge-pump chip to generate the negative supply is about a $2.00 part, so if cleaver>$2.00 then I'll stick to the dual-rails.

Thanks,
doug

2371. Re: RF Power Module Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-26 15:52:49 UTC
From: Norm Mann <folder0735@hotmail.com>
Message-ID: <3ca09ad9$0$189@news.impulse.net>
Source record: 45313

"Bill Harbour" <w.harbourjr@worldnet.att.net> wrote in message
news:deafe3d9.0203251406.450a2744@posting.google.com...
> I took a S-AU64 and a M67754 power module out of some old cellphones.
> Can I use these for QRP HF work?? Anyone with any experience using
> these? I'd also like to find datasheets for them.

I don't have data sheets, but if these are like other power modules I'm
familiar with, they may be designed to work in a specific frequency range
and will not be appropriate for use in the HF band.

-CB

2372. Re: Arcuturus Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-26 16:02:34 UTC
From: Jim Allen <jim_allen@agilent.com>
Message-ID: <1017158557.402101@cswreg.cos.agilent.com>
Source record: 45314

Robert,

It was a marketing ploy. They were advertised as being able to pull in weak stations because they
had a special blue color. Later on, they cheapened the process by turning the blue into a coating
rather than blue glass. When the customer noticed the coating wore off, they lost their appeal with
the public.

"Robert S. Bartel" <bobb@ulster.net> wrote in message news:3C9D1671.127DE34B@ulster.net...
> Other then being blue, what was special about the arcuturus tubes of the
> 20's ?
>

2373. Re: RF Power Module Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-26 18:00:03 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3ca0b63d.720627@news.freeserve.net>
Source record: 45315

Bill, I would guess that these modules are intended for the
High-VHF/UHF bands. When you get down to DC (relativly speaking, ie
28Mhz and below) they will do nothing useful.
But I could be wrong, I usually am.
Mike W, G8NXD
--

On 25 Mar 2002 14:06:59 -0800, w.harbourjr@worldnet.att.net (Bill
Harbour) wrote:

>I took a S-AU64 and a M67754 power module out of some old cellphones.
>Can I use these for QRP HF work?? Anyone with any experience using
>these? I'd also like to find datasheets for them.
>
>Thx,
>
>Bill
>KD4PWB

2374. rf training

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-26 18:32:42 UTC
From: vshah101@aol.com
Message-ID: <20020326133242.00700.00000224@mb-cq.aol.com>
Source record: 45316

I would like to start an rf test equipment operation course training. From reading online forums, I know many others are interested in this type of training. However, getting people together to organize this is a challenge. Also, the cost of the equipment is expensive

Very few colleges offer rf courses and it is hard to get the courses. Also, you have to wait a whole school term if you miss this current class. Even when a class is offered, it does not have the training with useful content. The topice is presented academically and it is hard to put this knowledge to use. Some private training companies DO offer this training. However, they offer "short courses" for 2-5 days. Also, they charge something like $1500 per week, and not all of this is lab time. I believe, if I got some people together, the course can be done less expensively, and there would be more lab time and more training in this area.

I am in the MA/ Southern NH area. Anyone in this area interested in such training? I would like the format to be a combination of equipment usage and technical discussions. Do not hesitate to contact me if you are interested in rf test equipment operation. My email address is vshah101@aol.com. If you have some suggestions or comments, please reply in this forum.

Also, I am interested in getting people together and sharing their design project experience. This a good way to learn more about rf.

2375. Re: Bidirectional current measurement

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-26 18:36:57 UTC
From: k7itm@aol.com
Message-ID: <3200347.0203261036.7c7b6afa@posting.google.com>
Source record: 45317

Well, if the voltage across your 50mV shunt doesn't go beyond about 50mV, there should be no reason you can't do it with a simple op amp circuit. Just pick an op amp whose input common mode range extends to the negative rail, and 50 millivolts beyond (or however far your shunt will take it). Connect the amplifier in a standard inverting configuration across the shunt: that would result in the op amp output going both + and -, and of course it can't go -. So to solve that problem, bias the op amp + input up just a bit, using a resistive divider from a reference voltage.

In fact, if you use a resistor R from each op amp input to the two sides of the shunt, and a resistor n*R from op amp (-) input to op amp output, and a resistor also n*R from V-reference to op amp (+) input, then the op amp output will be referenced to the V-reference voltage. It's just the "output" stage of a standard three-amplifier instrumentation amp, set up for a gain of n. You don't need the input stages, because your source is a very low impedance to begin with. Furthermore, biased like this, the op amp inputs never need to go negative. You just have to deal with an output voltage as a difference from the reference voltage. (Note: if you're running an ADC from a reference and the ADC FS = the reference voltage, you can make that second n*R actually two 2*n*R resistors, one to common and one to Vref, and then the output of the op amp is centered on Vref/2.)

BTW, I'm doing just this sort of thing in a circuit (some of my charity work) to monitor power line VOLTAGE to the tune of 350 volts peak above and below the rail...and of course my "n" is actually about 0.006 so I get a nominally 4V p-p signal, centered on +2.5V, to digitize with a PIC16C73 or similar. The differential nature of the input means that my output side common isn't connected to either side of the input...there's over a megohm of isolation (the input resistors). It just couldn't accomodate a line voltage that was offset too far from the output common.

(How much money does that save you? Do I get a commission?)

Cheers,
Tom

"doug dotson" <ddotson@digidata.com> wrote in message
news:<Dv%n8.4909$T_.98772@iad-read.news.verio.net>...
> Greetings!
>
> I am attempting to measure current using a 50mV shunt. The
> current can be moving in either direction. Clearly I can use
> an instrumentation amp with dual-rail power supply, but this

> would be the only need for a negative voltage in my system.
> Does anyone know of a cleaver way to do this using a
> single rail supply? A charge-pump chip to generate the negative
> supply is about a $2.00 part, so if cleaver>$2.00 then I'll
> stick to the dual-rails.
>
> Thanks,
> doug

2376. Re: Transistor switching circuit Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-26 19:07:35 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0203261107.122b5375@posting.google.com>
Source record: 45318

skypilot1@blueyonder.co.uk (Albert Corker--G4NJI) wrote in message news:<3ca059d1.10541952@news.blueyonder.co.uk>...
> Thanks for reading this plea for help.
> I am wanting a circuit to build a single transister switch to enable
> me to get a 5v out of my radio when i receive a signal,I would be
> gratefull for any sugestions.
> Thanks in advance.
> Bert G4NJI
>
> Albert Corker
> G4NJI---Rotherham,S/york's

Does your radio have an S meter?

You could build a simple op-amp circuit that senses the current in the S meter circuit.

Another way would be to tap into the AGC circuitry. Most commercial receivers now have some form of AGC. This might work better than using the S meter. I would suggest a high input impedance op-amp buffer followed by a schmitt trigger circuit.

To go beyond these general comments we would have to know the details of your receiver circuitry.

Jim
N8EE

2377. Re: Bidirectional current measurement

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-26 20:45:45 UTC
From: Mark Little <mark@brigadoon.apana.org.au>
Message-ID: <4nmq7a.0oo.ln@chuckie.apana.org.au>
Source record: 45319

Have you considered using a chip designed for this purpose? There are single rail chips that can measure bi-directional curent. It provides a unipolar output with a current direction signal. Have a look at something like the Maxim MAX471 with built in sense resistor or the MAX472 which uses an external sense resistor.

regards,
Mark.

"doug dotson" <ddotson@digidata.com> wrote in message news:Dv%n8.4909$T_.98772@iad-read.news.verio.net...
> Greetings!
>
> I am attempting to measure current using a 50mV shunt. The
> current can be moving in either direction. Clearly I can use
> an instrumentation amp with dual-rail power supply, but this
> would be the only need for a negative voltage in my system.
> Does anyone know of a cleaver way to do this using a
> single rail supply? A charge-pump chip to generate the negative
> supply is about a $2.00 part, so if cleaver>$2.00 then I'll
> stick to the dual-rails.
>
> Thanks,
> doug
>
>
>

2378. Tuner design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-26 23:56:02 UTC
From: jwodell@provide.net
Message-ID: <3ca10a21.1154001@news.provide.net>
Source record: 45328

Decided to make a 10 meter antenna tuner. The all-band ones almost all fail up there.

Ah, but not much design information I could find. I even asked my electronics prof, and he just does digital.

Used to be that one used Terman. Found some computer programs on the net, but obscure.

Please e-mail to jwodell@provide.net

Thanks

73 jerry w8gnd

2379. Re: RF Power Module Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-27 00:04:30 UTC
From: Rich Griffiths <richg@one.net>
Message-ID: <3CA10C8E.C7975594@one.net>
Source record: 45320

Bill:

I did a quick Google search and found no S-AU64 but did find a site with
a bunch of other S-AVnn and S-AUnn units. As another respondent
suggested, it appears to be a UHF-only unit. Apparently, the "V" stands
for "VHF" and the U stands for "UHF". The S-AV17, for example, is
designed specifically for 144-148 MHz.

... Rich

Bill Harbour wrote:
>
> I do believe the S-AU64 is a Toshiba unit but I've not had much luck
> in finding a datasheet for it.
>
> Tnx,
>
> Bill
>
> Rich Griffiths <richg@one.net> wrote in message news:<3C9FB9E1.9124DC53@one.net>...
> > Bill:
> >
> > I'm guessing that the S-AU64 is a Toshiba unit (?) The last time I
> > looked, they had pretty good data sheets on the web. Try a search.
> >
> > GL
> >
> > ... Rich W2RG
> >
> >
> > Bill Harbour wrote:
> > >
> > > I took a S-AU64 and a M67754 power module out of some old cellphones.
> > > Can I use these for QRP HF work?? Anyone with any experience using
> > > these? I'd also like to find datasheets for them.
> > >
> > > Thx,
> > >
> > > Bill
> > > KD4PWB

2380. WTB: Triad M-15 mod transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-27 02:19:07 UTC
From: Chuck O'Neal <coneal@ultranet.com>
Message-ID: <a7raa6$55e$1@bob.news.rcn.net>
Source record: 45321
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Hi!
Anyone have one available? I will pay a $50 reward for one!
73,
Chuck...K1KW

2381. Re: Bidirectional current measurement

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-27 02:42:55 UTC
From: Prefered Customer <jfriley@no.thanks.iadfw.net>
Message-ID: <A7C9D9627C8E3F47.C2CC73C39DE5E13A.C65896380679ED02@lp.airnews.net>
Source record: 45322

"doug dotson" <ddotson@digidata.com> wrote:
>I am attempting to measure current using a 50mV shunt. The
>current can be moving in either direction. Clearly I can use
>an instrumentation amp with dual-rail power supply, but this
>would be the only need for a negative voltage in my system.
>Does anyone know of a cleaver way to do this using a
>single rail supply?

The easy way is to use a bridge rectifier with the shunt between the +
and - terminals and the AC terminals to the circuit to be measured.
Yes, you do have some offset but you only need a single rail.

Fred, W8OY
jfriley@ieee.nospam.org

2382. Re: Transistor switching circuit Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-27 03:18:35 UTC
From: Walter <walter@accessus.net>
Message-ID: <fSao8.270936$uv5.23864849@bin6.nnrp.aus1.giganews.com>
Source record: 45324

Albert, there is a little circuit that Ten Tec offers which is the
Smart Squelch circuit #1064 and is a T-Kit.

Another thing I have done is parallel a small relay with the
speaker output to give a dry contact closure. This works
well with FM, but I am not sure what kind/type of radio you are
working with and what kind of mode, ie FM, SSB, CW etc.

73...Walter, AG5P

"Albert Corker--G4NJI" <skypilot1@blueyonder.co.uk> wrote in message
news:3ca059d1.10541952@news.blueyonder.co.uk...
> Thanks for reading this plea for help.
> I am wanting a circuit to build a single transister switch to enable
> me to get a 5v out of my radio when i receive a signal,I would be
> gratefull for any sugestions.
> Thanks in advance.
> Bert G4NJI
>
> Albert Corker
> G4NJI---Rotherham,S/york's
>

2383. Re: Transistor switching circuit Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-27 03:20:14 UTC
From: ZZZjim_cronin@juno.comZZZ
Message-ID: <95e2au45p8aerf2ihscaot9vf2o18dmitc@4ax.com>
Source record: 45323

On Tue, 26 Mar 2002 11:21:46 GMT, skypilot1@blueyonder.co.uk (Albert Corker--G4NJI) wrote:

>Thanks for reading this plea for help.
>I am wanting a circuit to build a single transister switch to enable
>me to get a 5v out of my radio when i receive a signal,I would be
>gratefull for any sugestions.
>Thanks in advance.
>Bert G4NJI
>
>Albert Corker
>G4NJI---Rotherham,S/york's

What you're looking for is also known as a carrier operated relay or a COR signal.

Is this for FM and does the radio have a squelch control? If so, look at the schematic and track down the squelch section. For that matter, you could probably poke around that area with a meter while turning the squelch up and down.

73,
Jim
N2VNO

2384. FS: 2 nice Air Variables, 1-Cardwell, 1-National both 'bout 260pf>Cheep

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-27 03:48:14 UTC
From: rlucch2098@aol.com
Message-ID: <20020326224814.14798.00000305@mb-fr.aol.com>
Source record: 45325

Hi Guys;
Both of these caps are priced at $24.00ppd by US Priority mail.
Both in great shape, no cracked ceramics, both 1/4" shaft dia.
pic>>
http://www.baltimorepress.com/~wa2rqy/2capacitors.jpg
Thanks es 73.....RICH-WA2RQY RLUCCH2098@aol.com
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

2385. Triodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-27 04:09:40 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a7rgop$njos3$1@ID-124126.news.dfncis.de>
Source record: 45326

NOW AVAILABLE:

New Program, albeit belated, "TRIODE1.exe"

Program TRIODE1 assists with the design of triode, grounded-cathode, RF power amplifiers from 1 watt to any arbitrary large RF output power. For "anode" Americans can read "plate". For "tube" much of the English-speaking world can read "valve". (For grounded grids another program is needed.)

Tube operating conditions can be selected at 1 degree intervals from Class-A, via Class-AB1 and Class-AB2, to Class-C. In other words from anode current operating angles from 360 degrees down to very high conversion efficiency at 45 degrees.

The program first accepts a manufacturer's basic tube data: Mu = Amplification factor, Perveance which is related to cathode electron emission and equivalent conductance, and alpha, a value which defines the curvature in a tube's current-vs-voltage characteristics. The fraction of cathode current intercepted by the grid, sometimes neglected, is also taken into account. But if one or two parameters are unavailable all is not lost.

The program user can then enter his own operating conditions such as DC anode supply volts, amplitude of grid and anode RF voltages, intrinsic Q of the tank coil, output circuit operating Q and, of course, anode current operating angle and operating frequency. Operating angle is a little known but vital factor which a circuit designer must not neglect. It profoundly effects circuit operation by controlling a tube's internal resistance.

It may not go unnoticed there is no reference in the program as to what the internal resistance of a tube might be. Or to matching an amplifier's internal resistance to its load for the purpose of maximising power delivered to that load.

Computed output data includes DC anode current, DC power input, anode dissipation, conversion efficiency, DC grid current, DC grid bias, grid bias resistor value, grid operating angle, grid dissipation, and grid RF drive power required to satisfy the assumed operating conditions. (A common design

feature not covered by the program is deliberate dissipation of RF drive power in a damping resistor to improve operating stability. However this does not effect basic circuit design.)

The output circuit may be either a simple tuned tank circuit with a link coupling to a 50-ohm load, or a Pi-matching circuit. All coil and capacitor component values are computed. It is left to the designer to take parasitic tube and circuit capacitance and inductance into account. For coil dimensions, number of turns etc., refer to program SOLNOID2.

If a user should be unfamiliar with the characteristics of triode electron tubes this program will be found to be of educational value. By hitting one or another key the essential data for two types of tube can be entered ready for experimenting. But a set of anode/grid currents versus anode/grid voltage characteristics of any triode tube is essential.

There is a brief introductory note on each parameter used in the program. It may be of passing interest the basic mathematics are equally applicable to that much later 3-terminal amplifying device - the transistor.

On the other hand, for people who prefer the simple life, program TRIODE1.exe can be used just to calculate L and C values of a Pi-matching network to be used with a 3-500Z or any other power amplifier.

If Terman, Everitt, et-al had had this program available in the 1930's they would have got along much faster. ;o)

Download TRIODE1 from website below in a few seconds. One self-contained binary file only. Not zipped up. No unzipping inconvenience. Run immediately. All in plain English. Old timers can find out where they went wrong.

****

Regards, Reg G4FGQ

Free Radio Design Software

Http://www.g4fgq.com

****

2386. Re: RF Power Module Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-27 11:43:22 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3CA1B05A.1D056A12@bloomer.net>
Source record: 45327

I didn't find the SAU64, but the M67754 lists the max bandwidth as
810-860 MHz. It won't work at HF and I doubt the other one will as
well. The lowest freq. range I found for these brick modules is 50-54
MHz. Take a look at http://www.rfparts.com/module.html

I'm not saying there aren't modules out there that are made for HF, but
I haven't seen any indication of it.

Scott
N0EDV

Bill Harbour wrote:
>
> I took a S-AU64 and a M67754 power module out of some old cellphones.
> Can I use these for QRP HF work?? Anyone with any experience using
> these? I'd also like to find datasheets for them.
>
> Thx,
>
> Bill
> KD4PWB

--
Scott
http://corbenflyer.tripod.com/
Building RV-4
Gotta Fly or Gonna Die!

2387. Re: Tuner design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-27 14:12:22 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a7sk33$nd7jl$7@ID-124126.news.dfncis.de>
Source record: 45329

Jerry W. O'Dell
> Decided to make a 10 meter antenna tuner. The all-band ones almost
> all fail up there.
>
> Ah, but not much design information I could find. I even asked my
> electronics prof, and he just does digital.
>
> Used to be that one used Terman. Found some computer programs on
> the net, but obscure.
==========

Have you tried program "T_TUNER" ?

Yes, many tuners fail around 30 MHz. This is *always* because of internal parasitic capacitance and and inductance associated with physically large components needed below at 14 MHz and below. An actual tuner circuit at 30 MHz is far more complicated than what can be seen by eye. Unseen extra bits of L and C occur all over the place.

The *only* solution is to construct a physically small tuner for 14 or 21 MHz and upwards. Enclose it in a very small box and keep all wiring down to an absolute minimum. The inconvenience of having to change tuners for the higher frquency bands just has to be lived with. It can be done with coax switches but they introduce their own very similar problems.

I don't think there's much to choose between T and Pi networks. If you are interested only in one band like 10m, then an L-network may be all that's necessary. Switch along a small self-supporting coil plus one small variable capacitor. Maximum value of variable capacitors should be no more then needed. Use program SOLNOID2 to design self-supporting coils. 16 or 14 gauge enamelled copper magnet wire will do fine. It is easier to find than bare copper.

Don't even dream about roller inductors at 30 MHz !

Download programs from website below. Just get yourself in the right ball-park and you will probably be quicker just by winding a few turns and checking what happens. Worry about putting it in a box only after you've got it working.

Don't place undue confidence in your SWR meter. If the transmitter seems happy stop fixing it and have fun !

****
Regards, Reg G4FGQ
Free Radio Design Software

Http://www.g4fgq.com
****

2388. Re: RF Power Module Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-27 17:10:50 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0203270910.1d676b2e@posting.google.com>
Source record: 45330

w.harbourjr@worldnet.att.net (Bill Harbour) wrote in message
news:<deafe3d9.0203251406.450a2744@posting.google.com>...

> I took a S-AU64 and a M67754 power module out of some old cellphones.

> Can I use these for QRP HF work?? Anyone with any experience using

> these? I'd also like to find datasheets for them.

Since you already have the items and they didn't cost
you anything, you could apply power, waft a bit of RF
at them and see what happens. Since HF is so far removed
from 800 MHz the matching networks will behave as
(approximately) open or short circuits.

I've read in history books that ham radio was once an
experimental hobby.

Laura Halliday VE7LDH "Que les nuages soient notre
Grid: CN89lg pied a terre..."
ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

2389. Re: Transistor substitutions needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-27 18:05:31 UTC
From: n4dia-fl <n4dia-fl@cox.net>
Message-ID: <LRno8.37620$DX6.1067669@news2.east.cox.net>
Source record: 45331

http://nte01.nteinc.com/nte/NTExRefSemiProd.nsf/$$Search?OpenForm

"garbo" <garbo@garbo.com> wrote in message
news:3C9F574F.219721E3@garbo.com...
> URLs to online transistor substitution guides?
>
> I found < http://www.ee.washington.edu/circuit_archive/parts/cross.html
> > but it doesn't meet the requirement..
>
> The requirement: What are these as 2N... part numbers? (The real
> requirement: I want to go to RS and pick up reasonable facsimilies for
> these - what are the RS part numbers?)
>
> 2SK19 Y
> 2SK19 GR
> 2SC373
>
> Thanks!
>

2390. Re: Transistor substitutions needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-27 18:06:33 UTC
From: n4dia-fl <n4dia-fl@cox.net>
Message-ID: <JSno8.37632$DX6.1067833@news2.east.cox.net>
Source record: 45332

And

http://www.semiresources.com/

"garbo" <garbo@garbo.com> wrote in message
news:3C9F574F.219721E3@garbo.com...
> URLs to online transistor substitution guides?
>
> I found < http://www.ee.washington.edu/circuit_archive/parts/cross.html
> > but it doesn't meet the requirement..
>
> The requirement: What are these as 2N... part numbers? (The real
> requirement: I want to go to RS and pick up reasonable facsimilies for
> these - what are the RS part numbers?)
>
> 2SK19 Y
> 2SK19 GR
> 2SC373
>
> Thanks!
>

2391. low freq PLL for jumpy FM carrier tracking?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-27 20:20:21 UTC
From: Jan Wagner <jwagner@cc.hut.fi>
Message-ID: <3CA22985.6A8D508B@cc.hut.fi>
Source record: 45333

Hi,

on the matter of Tesla coils, i.e. solenoid coils...

This question is kinda complicated, but, what PLL chip would you think could work for the following setup?

[short form of question: Are there any PLL chips for receiving FM transmissions for transmitters operating below 500 kHz? (yeah, kilohertz). With max carrier frequency deviations of 30kHz, but 20kHz typical? The carrier is modulated slowly, maybe 10kHz, but can jump some 10kHz suddenly.]

Long form:
I've an external user selectable frequency reference between 50kHz..500kHz in 1kHz steps. The reference should be injected into the PLL. It's similar to the tuning frequency / local oscillator.

The main purpose is to drive a multiresonant high-Q RLC tank circuit (Tesla coil) at its fundamental resonant frequency, which, by the nature of Tesla coils, drifts around quite horribly because there are streamers and high voltage arcs and other cool stuff (desired effect) happening which will load down the solenoid coil and also change it's self-capacitance => self-resonant freq changes.

To track that resonant freq, the VCO out-put 50% duty square wave signal applied to the tank and the current drawn by the tank should be in phase. That's the purpose of the PLL. Sooo... one of the PLL inputs is fixed: the user-specified frequency. The other two change in frequency, i.e. the actual VCO output frequency and feedback signal (ok they have the same freq always, but a different phase in out-of tune conditions).

Yeah and not only this but the lock and track ranges should be +-30kHz (at most) around the user-specified frequency, always. And as said, that freq can be between 50kHz..500kHz. So I've been breaking my head over how to accomplish this... Any ideas? Tips?

Pocket digital FM receivers use a PLL, maybe similar to MC145157, with programmeable dividers. That's ok at >80MHz, but not nice at 500kHz as fast tracking is required (yeah, 14-bit counter, counting 500kHz pulses to finally pass through will take AGES...)

I'm not so familiar with the different varieties of PLL chips and their special functions and doodads, so that's the reason for asking here...

many thanks,
- Jan
--
****
high voltage at http://www.hut.fi/~jwagner/tesla

2392. DTMF IC Where to find??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-27 21:23:26 UTC
From: antennas@yahoo.com
Message-ID: <e8be44e3.0203271323.7d562ded@posting.google.com>
Source record: 45334

I need a dtmf tone generator IC. Can anyone help me with a part number? I have looked around quite a bit but I can't find any so far. Some old ones that are not made anymore. A SOIC package would be great if possible. But anything will be good. Thanks folks.Send me an email if you would please.

Andrew VE8AE

2393. Re: Transistor substitutions needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-27 21:28:22 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0203271328.3a1c3a9f@posting.google.com>
Source record: 45335

garbo <garbo@garbo.com> wrote in message news:<3C9F574F.219721E3@garbo.com>...
> URLs to online transistor substitution guides?
>
> I found < http://www.ee.washington.edu/circuit_archive/parts/cross.html
> > but it doesn't meet the requirement..
>
> The requirement: What are these as 2N... part numbers? (The real
> requirement: I want to go to RS and pick up reasonable facsimilies for
> these - what are the RS part numbers?)
>
> 2SK19 Y
> 2SK19 GR
> 2SC373
>
> Thanks!

Try http://www.nteinc.com/
They have a pretty good downloadable cross reference. In fact, I need
to update mine. They have a newer one out now...MK

2394. Re: DTMF IC Where to find??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-27 21:52:05 UTC
From: john graesser <graesser@tca.net>
Message-ID: <ua4fld10e91k3e@corp.supernews.com>
Source record: 45336

"VE8AE Andrew" <antennas@yahoo.com> wrote in message
news:e8be44e3.0203271323.7d562ded@posting.google.com...
> I need a dtmf tone generator IC. Can anyone help me with a part
> number? I have looked around quite a bit but I can't find any so far.
> Some old ones that are not made anymore. A SOIC package would be great
> if possible. But anything will be good. Thanks folks.Send me an email
> if you would please.
>
> Andrew VE8AE

Radio Shack sells (or used to sell) a small gadget that you could hold up to a rotary phone and input dtmf tones, I have one that I keep with my pocket 2 meter rig, if I hold it up to the mic input, I can use it to bring up the autopatch and dial.

If I recall it was less than 10 dollars for a complete solution to my problem (rig without keypad) perhaps you could buy one and hack enough of it to meet your needs.
thanks, John.
KC5DWD

2395. Re: DTMF IC Where to find??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-27 22:54:58 UTC
From: Tom2000 <tom2000@mindspring.com>
Message-ID: <2cj4aucgq3emlt4js4j3d27uabv6p1gdvq@4ax.com>
Source record: 45337

On 27 Mar 2002 13:23:26 -0800, antennas@yahoo.com (VE8AE Andrew) wrote:

>I need a dtmf tone generator IC. Can anyone help me with a part
>number? I have looked around quite a bit but I can't find any so far.
>Some old ones that are not made anymore. A SOIC package would be great
>if possible. But anything will be good. Thanks folks.Send me an email
>if you would please.
>
>Andrew VE8AE

Andrew,

I don't know if they still make them, but I used to use the Mitel series
of DTMF generator and decoder chips successfully.

Very 73,

Tom AB9B

2396. Re: Tuner design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-27 23:54:24 UTC
From: SideBand <abNO8SPAMlr@csotbs.org>
Message-ID: <3CA25BB0.6020606@csotbs.org>
Source record: 45338

One could always build in a bypass switch for the lowband tuner and the highband tuner (160-20 and 17-10, respectively) each, and just use the one needed. Bypass the lowband tuner for the highband stuff, and vice versa...

Just an idea.

de AB8LR, Chris

Reg Edwards wrote:

> Jerry W. O'Dell
>
>>Decided to make a 10 meter antenna tuner. The all-band ones almost
>>all fail up there.
>>
>>Ah, but not much design information I could find. I even asked my
>>electronics prof, and he just does digital.
>>
>>Used to be that one used Terman. Found some computer programs on
>>the net, but obscure.
>>
> ================================
>
> Have you tried program "T_TUNER" ?
>
> Yes, many tuners fail around 30 MHz. This is *always* because of internal
> parasitic capacitance and and inductance associated with physically large
> components needed below at 14 MHz and below. An actual tuner circuit at 30
> MHz is far more complicated than what can be seen by eye. Unseen extra bits
> of L and C occur all over the place.
>
> The *only* solution is to construct a physically small tuner for 14 or 21
> MHz and upwards. Enclose it in a very small box and keep all wiring down to
> an absolute minimum. The inconvenience of having to change tuners for the
> higher frquency bands just has to be lived with. It can be done with coax
> switches but they introduce their own very similar problems.
>
> I don't think there's much to choose between T and Pi networks. If you are
> interested only in one band like 10m, then an L-network may be all that's
> necessary. Switch along a small self-supporting coil plus one small
> variable capacitor. Maximum value of variable capacitors should be no more
> then needed. Use program SOLNOID2 to design self-supporting coils. 16 or 14
> gauge enamelled copper magnet wire will do fine. It is easier to find than
> bare copper.
>

> Don't even dream about roller inductors at 30 MHz !
>
> Download programs from website below. Just get yourself in the right
> ball-park and you will probably be quicker just by winding a few turns and
> checking what happens. Worry about putting it in a box only after you've got
> it working.
>
> Don't place undue confidence in your SWR meter. If the transmitter seems
> happy stop fixing it and have fun !
> ----
> **********
> Regards, Reg G4FGQ
> Free Radio Design Software
> Http://www.g4fgq.com
> **********
>
>
>
>

--
73 de AB8LR, Chris

http://csotbs.shopiwon.com/ for great deals on computer products.

2397. Re: low freq PLL for jumpy FM carrier tracking?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-28 02:38:34 UTC
From: k7itm@aol.com
Message-ID: <3200347.0203271838.519f3d6d@posting.google.com>
Source record: 45339

Jan Wagner <jwagner@cc.hut.fi> wrote in message news:<3CA22985.6A8D508B@cc.hut.fi>...

> [short form of question: Are there any PLL chips for receiving FM
> transmissions for transmitters operating below 500 kHz? (yeah,
> kilohertz). With max carrier frequency deviations of 30kHz, but 20kHz
> typical? The carrier is modulated slowly, maybe 10kHz, but can jump
> some 10kHz suddenly.]
...

Well, there are several PLL chips designed for relatively low
frequencies. Have a look at the NE56x series from Philips/Signetics,
and the CD4046/74HC4046/4096 chips.

(It does seem like what you really want is simply a power oscillator
which uses the resonance of the coil to determine frequency...but I
don't claim to know anything about Tesla coils.)

Cheers,
Tom

2398. Re: Transistor substitutions needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-28 02:52:07 UTC
From: la8ak.xnd@online.no
Message-ID: <3ca2611c.489214722@news.online.no>
Source record: 45340

On Wed, 27 Mar 2002 18:05:31 GMT, "n4dia-fl" <n4dia-fl@cox.net> wrote:

>http://nte01.nteinc.com/nte/NTExRefSemiProd.nsf/$$Search?OpenForm
>
>
>
>"garbo" <garbo@garbo.com> wrote in message
>news:3C9F574F.219721E3@garbo.com...
>> URLs to online transistor substitution guides?
>>
>> I found < http://www.ee.washington.edu/circuit_archive/parts/cross.html
>> > but it doesn't meet the requirement..
>>
>> The requirement: What are these as 2N... part numbers? (The real
>> requirement: I want to go to RS and pick up reasonable facsimilies for
>> these - what are the RS part numbers?)
>>
>> 2SK19 Y
>> 2SK19 GR
>> 2SC373
>>
>> Thanks!
>>
>
>

never quite understood the reason for seeking old replacements for an
old device which probably wasn't a good choice, at all!

In my FT-101B a stage using 2SC373Y was even unstable, but I didn't
hesitate to use a better device and the problem was cured

73,
LA8AK
--
remove ,xnd to reply

2399. Phase-Reversal Choke For Mosfet Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-28 06:03:09 UTC
From: brocks@mailandnews.com
Message-ID: <674752f2.0203272203.578e2d95@posting.google.com>
Source record: 45341

I am planning on building a simple mosfet class AB amp using two irf510 mosfets. I came across a design that uses a phase-reversal choke to feed the drains of the mosfets to provide the positive and negative to an output transformer that isn't center tapped. The choke/transformer uses 10 bifilar turn of #22 on 2 stacked ft-50-43 cores.

Brock, VA6BTS

2400. Re: DTMF IC Where to find??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-28 09:51:56 UTC
From: Leo van der Kallen <leo@vanderkallen.myweb.nl>
Message-ID: <a7up47psj1@azure.nl.gxn.net>
Source record: 45342

Hello,
From Mitel th MT8880 is a tranceiver, and the MT8870 is the receiver.
An old transmitter of dtmf is the SBA5089 used in the late 80's in Dtmf
phones
or the TDA1077 also used in old phones for transmitting of Dtmf.

Success
Leo PA3HFP

"VE8AE Andrew" <antennas@yahoo.com> wrote in message
news:e8be44e3.0203271323.7d562ded@posting.google.com...
> I need a dtmf tone generator IC. Can anyone help me with a part
> number? I have looked around quite a bit but I can't find any so far.
> Some old ones that are not made anymore. A SOIC package would be great
> if possible. But anything will be good. Thanks folks.Send me an email
> if you would please.
>
> Andrew VE8AE

2401. FS: RS 242 WW2 German power triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-28 10:48:14 UTC
From: arnoldg@c2i.net
Message-ID: <3ca2f534.9044009@news1.c2i.net>
Source record: 45343

Hello,

I have several of this antique globe shape German triode in stock. It is directly heated, an European 4-pin base and about 12W anode dissipation. The heater is 3.8V 0.72A, u=17, S = 3.0mA/V Max. anode voltage is 400V.The valves are NOS, but the boxes are mostly in bad shape. Pictures are available by e-mail.
Please contact me if you are interested.

Regards,

Arnold Goksyr

DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267
http://www.demostenes.no

Thousands of different valves in stock as well as sockets,transformers,books,caps,resistors and other components. Web site is updated every week. You can order on-line.

2402. Re: low freq PLL for jumpy FM carrier tracking?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-28 15:23:55 UTC
From: Jan Wagner <jwagner@cc.hut.fi>
Message-ID: <3CA3358B.EEF097E1@cc.hut.fi>
Source record: 45344

> Well, there are several PLL chips designed for relatively low
> frequencies. Have a look at the NE56x series from Philips/Signetics,
> and the CD4046/74HC4046/4096 chips.

Yeah I've tried those. By choosing resistors R1 and R2 on the VCO, it works fine, but only for a fixed range. Can't change the range in 1.0 kHz steps, digitally...

So the problem is, how to make it digitally tunable? i.e. shift the 30kHz lock&track range up and down according to the users wishes (not with a potentiometer! as it should be digital)...

I'd figure that a PLL low freq FM (or even AM!) radio receiver style setup should work for my project. Maybe someone here has already built a PLL MW receiver? And could suggest which PLL chip works well for this?

The other option was to just limit the PLL VCO input voltage to a specified, changeable range, but VCO freq vs input voltage linearity being what it is (+-1..+-10%), this will not give good tuning and also makes the system more sensitive to noise.

> (It does seem like what you really want is simply a power oscillator
> which uses the resonance of the coil to determine frequency...but I
> don't claim to know anything about Tesla coils.)

That certainly would be the simplest approach, and it would work very well were it not for that the Tesla coil (which is _really_ nothing else but a big single-layer solenoid coil) has multiple resonant frequencies quite close together, and even the unloaded and loaded system resonant frequencies differ by some 10kHz...

So a direct feedback thingy will allow locking to other than the fundamental. In the worst case the high voltage breaks out somewhere along the coil, and not from the dedicated full-metal breakout point on the top, and at the powerlevels involved (>500W) the coil will burn up.

- Jan
--
****
high voltage at http://www.hut.fi/~jwagner/tesla

2403. Re: DTMF IC Where to find??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-28 18:01:29 UTC
From: NoBody <NotHere@NoWhere.Net>
Message-ID: <3CA35A6E.477C942F@NoWhere.Net>
Source record: 45345

I have a box that uses an MK5089 .... don't know who makes/made it...

Ted KD4EE

VE8AE Andrew wrote:

> I need a dtmf tone generator IC. Can anyone help me with a part
> number? I have looked around quite a bit but I can't find any so far.
> Some old ones that are not made anymore. A SOIC package would be great
> if possible. But anything will be good. Thanks folks.Send me an email
> if you would please.
>
> Andrew VE8AE

2404. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-28 20:54:41 UTC
From: Jeff Kilgore <jkilgore@io.com>
Message-ID: <3CA38274.50205@io.com>
Source record: 45346
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Elecraft is coming out with a 100W PA option for their K2 soon. It is
internal, so the K2 becomes an all-in-one 100W HF rig.

73,
Jeff, KC1MK

Melissa in Colorado wrote:

> BTW, it sounds interesting, but I'm not really into QRP. Is anyone making a
> full featured all band HF transceiver kit that puts out full power? (like
> 100-200 watts PEP out?)

2405. Re: low freq PLL for jumpy FM carrier tracking?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-28 21:21:11 UTC
From: k7itm@aol.com
Message-ID: <3200347.0203281321.3d5d4ec3@posting.google.com>
Source record: 45197

Jan Wagner <jwagner@cc.hut.fi> wrote in message news:<3CA3358B.EEF097E1@cc.hut.fi>...
> > Well, there are several PLL chips designed for relatively low
> > frequencies. Have a look at the NE56x series from Philips/Signetics,
> > and the CD4046/74HC4046/4096 chips.
>
> Yeah I've tried those. By choosing resistors R1 and R2 on the VCO, it
> works fine, but only for a fixed range. Can't change the range in 1.0
> kHz steps, digitally...
>
> So the problem is, how to make it digitally tunable? i.e. shift the
> 30kHz lock&track range up and down according to the users wishes (not
> with a potentiometer! as it should be digital)...

Since the VCO center is set by a resistance to ground, just synthesize
that with a DAC controlled circuit. For example, if you drive a
multiplying DAC with the voltage on that PLL pin (through a simple
unity gain buffer) and connect the MDAC output (perhaps buffered to a
voltage output, if needed) through a resistor back to that pin, the
current in the resistor will be proportional to the voltage and to the
MDAC setting. You can add DC biases so that the tuning range is
limited if you wish. It appears the lock range setting is even
easier, since the voltage on the pin appears to be a constant; you
need only set the current taken from that pin.

Or...just do it all in a DSP.

...

> > (It does seem like what you really want is simply a power oscillator
> > which uses the resonance of the coil to determine frequency...but I
> > don't claim to know anything about Tesla coils.)
>
> That certainly would be the simplest approach, and it would work very
> well were it not for that the Tesla coil (which is _really_ nothing
> else but a big single-layer solenoid coil) has multiple resonant
> frequencies quite close together, and even the unloaded and loaded
> system resonant frequencies differ by some 10kHz...

Ah, then perhaps it would be good to design the coil so that it does
not have so many nearby resonances! Surely there's not much advantage
to them??

Cheers,
Tom

2406. WTB: HBR 16 Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-28 23:49:06 UTC
From: ljl160@aol.com
Message-ID: <20020328184906.26928.00000547@mb-fn.aol.com>
Source record: 45198

Anyone have an HBR receiver for sale - either working or non working or partially built? Im collecting parts to roll my own but would be nice to find another. Thanks

2407. Re: Phase-Reversal Choke For Mosfet Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-29 00:47:55 UTC
From: Peter Voelpel <peter.voelpel@t-online.de>
Message-ID: <a80dmh$f28$07$1@news.t-online.com>
Source record: 45199

just connect at opposite ends...

73 de Peter, DF3KV
Brock Schuler schrieb in Nachricht
<674752f2.0203272203.578e2d95@posting.google.com>...
>I am planning on building a simple mosfet class AB amp using two
>irf510 mosfets. I came across a design that uses a phase-reversal
>choke to feed the drains of the mosfets to provide the positive and
>negative to an output transformer that isn't center tapped. The
>choke/transformer uses 10 bifilar turn of #22 on 2 stacked ft-50-43
>cores.
>
>Brock, VA6BTS

2408. re:useing old microwave H/V transformers for P/S'

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-29 01:12:10 UTC
From: aa8wl <aa8wl@comcast.net>
Message-ID: <3CA3EBFF.92C0E740@comcast.net>
Source record: 45200

Hi all, anyone remember where the info was about converting old
microwave oven H/V transformers for use in H/V power supplies?? I
remember something about needing to remove a piece of metal on the
inside of the windings to be able to use them for H/V power supplies for
amps. if anyone remembers where I can get this info or which magazine it
was in I would appreciate this. Thanks in advance for the time. I
have been collecting many of these and would like to start building some
R-F amps for 75 and 40 meters for fun. 73' DE AA8WL
Sam

2409. Re: re:useing old microwave H/V transformers for P/S'

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-29 06:48:06 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <M5Uo8.1082$%U7.99487781@news.inreach.com>
Source record: 45201

Sam:

It was in Electric Radio a couple of years ago.

What you will see upon inspection of the transformer is some extra laminations on both sides of the cental core, between the primary and HV windings. You can drive these out with a punch and hammer, although from personal experience it is easier said than done, and you have to be careful not to damage the windings in the process.

Roger K6XQ

2410. Re: re:useing old microwave H/V transformers for P/S'

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-29 13:08:08 UTC
From: Bill & Suzie Whatley <spud286@attbi.com>
Message-ID: <YGZo8.152723$uA5.133478@rwcrnsc51.ops.asp.att.net>
Source record: 45202

Can you enlighten us on why the extra metal laminations should be removed?

Thanks,

WA5VRL
Willis

2411. transverter interfacing help req please

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-29 13:15:29 UTC
From: matt <mattobr@ntlworld.com>
Message-ID: <XNZo8.10812$Ko1.1973950@news6-win.server.ntlworld.com>
Source record: 45203

hi all

i am wanting to use my ft847 with a transverter for 23cms an was wondering what is the best was of controlling the transverter ,
cheers matt

g7obr

2412. re:useing old microwave H/V transformers for P/S'

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-29 13:21:16 UTC
From: philhorton@aol.com
Message-ID: <20020329082116.22377.00000689@mb-fv.aol.com>
Source record: 45204

The best article I know of was in QEX some few years ago. Don't remember the date. Maybe you can find it or a reference to it on the ARRL site The shunts are very obvious in these xformers and can be removed by hammering them out. Some are tighter than others, so be careful not to damage the windings. Also, we are talking about 2000+ volts, so be CAREFUL. They can be lethal!

73, Phil, N4CWX

2413. Re: re:useing old microwave H/V transformers for P/S'

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-29 15:37:33 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <9S%o8.1090$_41.103567415@news.inreach.com>
Source record: 45205

The magnetrons that these transformers are intended to power would draw excessive current without these shunts in the transformer. But in the kinds of applications most hams have in mind, it is not desirable to limit the current that can be drawn, so removing them is necessary to take full advantage of their ratings.

If you look at non-microwave oven transformers, you will not see such shunts.

Roger

2414. Re: re:useing old microwave H/V transformers for P/S'

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-29 20:03:40 UTC
From: Walter <walter@accessus.net>
Message-ID: <wM3p8.152990$2q2.12602789@bin4.nnrp.aus1.giganews.com>
Source record: 45206

Hi, here are the three articles that I could find on the power
transformers.

http://www.vaxxine.com/phil/QEX_HV_Power_Supply.doc
http://www.vaxxine.com/phil/QEX_HV_Power_Supply_W6.doc
http://www.vaxxine.com/phil/QEX_HV_Power_Supply.pdf

73, Walter, AG5P

<<<snipped>>>
"aa8wl" <aa8wl@comcast.net> wrote in message
news:3CA3EBFF.92C0E740@comcast.net...
> Hi all, anyone remember where the info was about converting old
> microwave oven H/V transformers for use in H/V power supplies?? I

2415. Re: useing old microwave H/V transformers for P/S'

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-29 21:42:10 UTC
From: aa8wl <aa8wl@comcast.net>
Message-ID: <3CA50C4E.97B158F5@comcast.net>
Source record: 45207

Thanks to all the info, it's exactly what I was looking for and several Ham friends will also enjoy this info as I will pass along the article to them and I'm sure there will be several amps in the works quite soon. Thanks again for you time and helpfulness and again this is an example of what Ham radio is all about. 73' DE AA8WL Sam

Walter wrote:

> Hi, here are the three articles that I could find on the power
> transformers.
>
> http://www.vaxxine.com/phil/QEX_HV_Power_Supply.doc
> http://www.vaxxine.com/phil/QEX_HV_Power_Supply_W6.doc
> http://www.vaxxine.com/phil/QEX_HV_Power_Supply.pdf
>
> 73, Walter, AG5P
>
> <<<snipped>>>
> "aa8wl" <aa8wl@comcast.net> wrote in message
> news:3CA3EBFF.92C0E740@comcast.net...
> > Hi all, anyone remember where the info was about converting old
> > microwave oven H/V transformers for use in H/V power supplies?? I

2416. Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-29 21:42:50 UTC
From: Gollywog <_eng@ilos.net>
Message-ID: <ud5p8.232019$kb.13109030@news1.calgary.shaw.ca>
Source record: 45208

Anybody:

What's up with Dan's Small Parts? I'm sitting on an order, waiting for the monthly change of catalog he mentions at http://www.fix.net/dans.html and there has been nothing since Feb 11/02. Worse yet I've tried 5 times (various days & times) and I can't get an answer on the phone. At this point I'm glad I'm still holding the money order! I've done a google and there don't seem to be any complaints to date - what's up?

Mike
va4mgw

********* \\\\lll//// *********
********** \ -- -- / **********
*********** (\@ @/) ***********
*** --oOOOo---(_)---oOOOo-- ***

2417. re:useing old microwave H/V transformers for P/S'

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-29 21:58:27 UTC
From: ae517@FreeNet.Carleton.CA
Message-ID: <a82o23$g12$1@freenet9.carleton.ca>
Source record: 45209

PhilHorton (philhorton@aol.com) writes:
> The best article I know of was in QEX some few years ago. Don't remember the
> date. Maybe you can find it or a reference to it on the ARRL site The shunts
> are very obvious in these xformers and can be removed by hammering them out.
> Some are tighter than others, so be careful not to damage the windings. Also,
> we are talking about 2000+ volts, so be CAREFUL. They can be lethal!
>

It was in Jan/Feb 1998 QEX, author Randy WI5W.

--
73 de va3rr/aa8lu
http://www.qsl.net/va3rr

2418. ** FLEA at MIT ** Sunday April 21st Cambridge MA

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-30 01:13:09 UTC
From: w1gsl@mit.edu
Message-ID: <3ca51125$0$3949$b45e6eb0@senator-bedfellow.mit.edu>
Source record: 45210
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,rec.radio.info,sci.electronics.misc,ne.forsale,ne.general,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

Spring has sprung and the seasons first FLEA at MIT
is just a month away.....

*** GREAT NEWS We again have full use of the garage and outdoor
lots for sellers !!!

****
****

Summary: Buy Sell SWAP Ham Radio Electronics Computers 9AM - 2PM

*** !!!! In our Traditional GARAGE and lot !!!! ****
so come rain or shine or super heat the Flea is on !!!

********* $1 buyers discount with hardcopy of this notice ********

COMPUTERS - ELECTRONICS - HAM RADIO - COMPUTERS - ELECTRONICS - HAM RADIO

FLEA all SUMMER at MIT
Sunday April 21st 2002
9AM-2PM

Come to the city for a great flea - plenty of free parking.

MIT's electronics and ham radio flea will take
place on the third Sunday of each month this summer,
April thru October.

There is tailgate space for over 600 sellers and
free, off-street parking for >2000 cars!

Buyers admission is $5 (you get $1 off if
you're lucky enough to have a copy of our ad)
and sellers spaces are $20 for the first and
$15 for each additional at the gate.

The flea will be held at the corner of Albany and
Main streets in Cambridge; right in the Kendall
Square area from 9AM to 2PM, with sellers set-up
time starting at 7AM.

SEASON PASS + Advance Discounts

A sellers discount season pass is available untill
April 21st which offers a 33% discount. See the
registration form below for full seller info.

*** Attention Sellers ***
Prepaid vendors.. Season Pass or monthly,
will be admitted FIRST.
Separate lines will form prior to gate opening
for prepaid and nonprepaid vendors

!! RAIN or SHINE !! Have no fear of rain, a covered
well illuminated tailgate area is available for all
sellers (6'8" clearance).

Talk-in: 145.23- (PL 88.5) W1BOS/R and
W1XM/R-449.725/444.725 (PL 114.8/2A).

Sponsors: MIT Electronics Research Society
MIT UHF Repeater Association (W1XM)
MIT Radio Society (W1MX)
Harvard Wireless Club (W1AF)

For more info / advanced reservations 617 253 3776

********** $1 buyers discount with hard copy of this notice ************

To be a PrePaid Vendor for the April SWAPFEST, Mail the coupon below
by April 10th.

FLEA at MIT 2002 Rates

SELLERS

This year each vendor must have a Cambridge Vendor License.
We will do all the paperwork to get the one day Cambridge licenses.
To keep the spaces affordable we are discounting your first space.
To use your spaces the named vendor MUST be present.
Rates include one admission per space.

Season Pass $99 First Space - includes $70 for Cambridge Vendor Licenses
$70 Each additional space

Advance $17 First space - includes $10 Cambridge Vendor License
$12 Additional Spaces
Must be received by the 5th of the month.

Gate Admission $20 First Space - includes $10 Cambridge Vendor License
$15 Additional Spaces
Admission is after the prepaid vendors

Early Bird Buyer -Admission after the prepaid vendor line is admitted. ~ 7:15AM
** You may not sell. **
$15 per person at the gate.
$70 Season Early Bird Buyer

********** cut here **********

FLEA at MIT 2002 Advance Space Application

_____ 1st Season Pass @ $99 _____ Additional Season Spaces @ $70

____April ____May ____June ____ July ____Aug ___Sept ____Oct
@ $17 for the first each month + $12 each additional

_____ Season Early Bird Buyer @ $70 ** NB You may not sell. **

Name _____ Call _____ $ Included_____

Address _____ Phone _____ Make Check to
The MIT Radio Society
City _____ State _____ Zip _____ PO Box 397082
Cambridge MA 02139
E-mail _____

****
Steve Finberg W1GSL w1gsl@mit.edu
PO Box 82 MIT Br Cambridge MA 02139-7082 617 258 3754
****

2419. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-30 02:34:28 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uaa92p2u39t3c9@corp.supernews.com>
Source record: 45211

Sometimes he is a little late on that page, so I wouldn't get too worked up about it. Although, the last time he was a couple of months updating it, the address had been changed and I was looking at an old one.

As far as the phone, I don't think I've ever heard a rumor of someone getting an answer. I really don't know the point of putting the number on the page.

..

"Gollywog" <_eng@ilos.net> wrote in message news:ud5p8.232019$kb.13109030@news1.calgary.shaw.ca...
>
> Anybody:
>
> What's up with Dan's Small Parts? I'm sitting on an order, waiting for the

2420. FS: 400 pF, 30 kV Ceramic Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-30 04:00:28 UTC
From: Bradley Hernlem <b.hernlem@worldnet.att.net>
Message-ID: <wLap8.12711$se.1225917@bgtnsc04-news.ops.worldnet.att.net>
Source record: 45212

For Sale:

High Voltage Ceramic Capacitors (Doorknob)

400 pF, 30 kV, N4700

for complete description see:
http://www.murata.com/catalog/c41e1.pdf

These are pulls from high voltage equipment.
Applications in HV power supplies, Ham applications
and Tesla Coils.

Terms:

$4 each plus shipping. If not satisfied, return in original
condition (within 7 days of delivery) for refund of purchase
price less shipping.

Brad

2421. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-30 04:10:20 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CA53AAE.5082@pop.removethistomailme.net>
Source record: 45213

xpyttl wrote:
>
> Sometimes he is a little late on that page, so I wouldn't get too worked up
> about it. Although, the last time he was a couple of months updating it,
> the address had been changed and I was looking at an old one.
>
> As far as the phone, I don't think I've ever heard a rumor of someone
> getting an answer. I really don't know the point of putting the number on
> the page.
>

Reminds me of why I like Digi-Key. This morning at 1:30 AM, I created an order on their site for about 30 different line items, mostly surface-mount parts. I wrote in a request for FedEx Saturday delivery in their "Order Notes" field, typed in my credit-card number, and hit "Submit." At 8:16 AM, the package's tracking # appeared in my mailbox.

No printing out my own order form, cleaning out the ATM and waiting in line to buy a money order, addressing an envelope, and waiting for the US Pony Express to truck my order to Montana and back, where the proprietor might or might not have been eaten by wolves last Tuesday. I mean, geez... most small-scale vendors don't have Digi-Key's level of business infrastructure, but the least they can do is answer their phones and take PayPal or other forms of net-compatible payment.

To Dan's credit, though, I've bought from him on eBay and always received great stuff at great prices. He has started new auctions (under the user ID 'twisttwinkel') within the past week, so I don't think the eaten-by-wolves scenario is likely. Probably just swamped with eBay business at the moment.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2422. uhf vhf

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-30 07:15:30 UTC
From: Mr E Crane <crane3@cablerocket.com>
Message-ID: <3ca56647.0@209.128.1.3>
Source record: 45214

for sale one adi 600 d looking to trade for an item
this is a vhf uhf with cross band rept. had cell phone freq.
also. has full coverage. ditigal display. comes with pc software for
progrmming in channels many many features.
more than most radios. mint condition. for furthere info you can email me.
not looking to sell looking totrade an item of equal value. if interested
email me asap.

for furthere information.

2423. QRP transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-30 13:35:23 UTC
From: gil <gilpi@mindspring.com>
Message-ID: <a84etv$e9s$1@nntp9.atl.mindspring.net>
Source record: 45215

Im interested in building a very simple CW QRP transmitter for 40, 30 or 20
m
Any guidance, web sites or plans appreciated

Gil

2424. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-30 13:37:21 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uabft94jfhhv6f@corp.supernews.com>
Source record: 45216

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message news:3CA53AAE.5082@pop.removethistomailme.net...

> Reminds me of why I like Digi-Key.

I have to say I'm a huge fan of DigiKey. While they are definitely not the low-priced spread, their prices aren't bad, and their customer service is nothing short of stellar.

But they don't have much in the way of RF parts. Dan's has a lot of stuff you can't get elsewhere, or that would be very expensive elsewhere. And while the whole snail mail thing makes getting the order pretty slow, he does provide nice stuff.

Having discovered radioshack.com (not your grandfather's Radio Shack) and kitsandparts.com, though, I have to admit to ordering from Dan's less and less. Diz (kitsandparts) has toroids at far better prices than anywhere, although you do need to order quite a few, and rs.com has pretty much everything, although their toroid prices are a tad high, and their shipping is high for larger orders (but interestingly they have the best shipping deal for small orders).

Still, though, Dan's transformer kit is hard to beat - if you don't make hundreds of mixers you would end up spending a ton of money for the same thing, and for some semiconductors, the only other choice seems to be RF Parts, whose prices are breathtaking. And for weird little bits of hardware, where else can you go?

..

2425. Can one substitute transformer wires and cores?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-30 14:50:01 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0203300650.1ab54362@posting.google.com>
Source record: 45217

Although I am new to homebrewing, I already have a pet peeve: circuit projects that require parts that aren't available at Radio Shack or local electronics stores. I don't like the idea of spending $5 in shipping to buy $5 in parts or having to gather a list of all parts needed for all possible projects I want to build so that I only have to pay for shipping once.

I find that transformers are my biggest source of this pet peeve. One project I am working on requires an Amidon BLN-43-2402 ferrite binocular core. Other projects require different cores. One project requires #30 enameled wire. Another project might use #24 wire, and something else might use #28 wire. I am reading the transformer section in _The ARRL Handbook_, and I notice that some of the important parameters include the efficiency factor, core permeability, and coupling coefficient.

Can anyone tell me the process you go through when substituting transformers? It seems to me that if you know what frequency RF the transformer will be handling, the amount of power it will handle and perhaps other performance factors, then you can understand what you need. It also seems to me that these performance parameters are determined by design parameters like the size of the core, the shape of the core, the permeability of the core, the thickness of the wires, the number of turns used, and perhaps one or two more factors I am overlooking.

Can anyone shed some more light on just what performance requirements you have for a transformer and how you decide on the design parameters? I think the parts listed for projects in the ARRL books were chosen because the individual author of the project had an excess inventory of the parts or was able to find these parts at his/her particular Radio Shack at the time. But then, what was widely available locally at one place and time may not be available here and now.

Jason Hsu, AG4DG
jason_hsu_802701@@@yahoo.com
http://www.jasonhsu.com/ham_radio-technical.html

2426. Re: Can one substitute transformer wires and cores?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-30 15:39:04 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <DZkp8.1218$Rp4.116700197@news.inreach.com>
Source record: 45218

Jason:

You have put your finger on what I have heard called "homebrewer's lament". It isn't easy to find parts that are affordable, easily obtainable, and identical to the ones in the designs you are following. You often have to go to several (or many) parts sources and deal with shipping charges, minimum orders, handling charges, back order delays, etc. When you add it all up, you find that it is more expensive to buy all the parts than it is to buy a commercially produced unit, which of course comes assembled, tested, guaranteed and has a repair facility with people who are familiar with its problems.

You can sometimes substitute parts you have on hand, for exemple instead of the specified Amidon BLN-43-2402 core you could use one you salvaged from an old TV 300/75 ohm balun. But the results you get can be disapointing. And when you have substituted many parts in order to use what you have on hand, and the device doesn't work, what part do you blame? For that reason, you should always try to follow the original design as closely as possible.

These difficulties have made parts kits popular. Many authors know how difficult it can be to find parts for their projects so they make kits available or at least let you know where you can get the parts. The DDS VFO in QST a few months ago is a good example of this.

Flea markets are also good places to shop for parts, but this favors a reversal of the parts acquisition process--instead of shopping for specified parts for a particular project, you see parts that are cheap and you find (or create) a project to use them.

If you have a room full of test equipment you can do measurements to make sure the parts you want to substitute are suitable. Most of us have very rudimentary test labs (VOM, grid dip meter, SWR meter) so we just use the "empirical method" (trial and error). Yes, the results are often disappointing, but the successes make it worth the effort.

Roger K6XQ

2427. Re: Help in desiging Xtal Ladder Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-30 16:20:36 UTC
From: msix@plato.nmia.com
Message-ID: <oBlp8.51095$Ou.15152@atlpnn01.usenetserver.com>
Source record: 45219

No BFD...
Try 100pF to ground between the xtals and think 1500 ohms at
both ends. 4 xtals better. Try 100/150/100pF.
Use silver micas. Tweak from there.
If you want to vary the bandwidth, try 24/24pF in parallel with
matched varicaps run thru 100K resistors from 9-12V to a pot.
If 4 xtals, try 24/47/24pF plus the varicaps...
John W7ZFB

Bill wrote:
>I want to design a 3 pole xtal filter (IF 2.457Mhz) for a QRP simple
>superhet I'm building. The xtals are ECS HC-49/U Microprocessor
>2.4576 MHZ 32pH. I just want to be in the ballpark for an ok IF
>filter so I don't want to spend a lot of time analyzing the filters
>etc. Anyone have an idea of what value caps to use and what the
>input/output impedance may be?? Just get me in the ballpark and I'll
>be happy.

>Thanks,

>Bill
>KD4PWB

2428. Re: Can one substitute transformer wires and cores?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-30 18:02:44 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <85np8.66646$u77.17222652@news02.optonline.net>
Source record: 45220

Hi,

On most projects you can go up (smaller diameter) two wire sizes without major problems. If the core will mechanically accept larger wire you can usually go down two wire sizes. With a #28 wire specified either #26 or #30 may work.

Magnet wire is generally the hardest thing to find. One unusual source is the inside of dead power transformers. It's a pain to take them apart, but the wire is free. Another local source is an electric motor repair (re-wind) shop. They use a wide range of wire and the 10 feet that will last you a lifetime is scrap to them. They use it a couple of hundred feet at a time on a large motor.

The best bet for cores is to buy the "experimenters kits" that most major core manufacturers sell. Generally you get 5 or 10 of each of a variety of cores. Amidon, Feronics, MicroMetals, and Fairrite all have pretty good kits listed on their web pages.

If you do order up normal cores the next problem you hit is a minimum order limit that is pretty steep. About the only way around this is to order a range of materials and diameters so once the order comes in you have a lifetime supply.

Hamfests and various junk sales are also a good source of some of this stuff. I have found spools of magnet wire gathering dust in some of the oddest places. Generally a couple of bucks will buy a spool of what ever they have. Unlabeled cores are the same kind of thing. If they don't know what they have they generally sell them dirt cheap. You then have to take them home and figure out what they are, but that's not to hard. Throw a few turns on them and measure the inductance. That will give you permeability and narrow down the material pretty quick.

Most of us have boxes and boxes of all sorts of weird parts that are waiting for a project. It's pretty much the only way to get around spending a bunch of money every time you want to do anything at all.

Don't know if any of that helps or not ...

Take Care!

Bob Camp
KB8TQ

"Jason Hsu" <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0203300650.1ab54362@posting.google.com...

> Although I am new to homebrewing, I already have a pet peeve:
circuit
> projects that require parts that aren't available at Radio Shack or
> local electronics stores. I don't like the idea of spending $5 in
> shipping to buy $5 in parts or having to gather a list of all parts
> needed for all possible projects I want to build so that I only have
> to pay for shipping once.
>
> I find that transformers are my biggest source of this pet peeve.
One
> project I am working on requires an Amidon BLN-43-2402 ferrite
> binocular core. Other projects require different cores. One project
> requires #30 enameled wire. Another project might use #24 wire, and
> something else might use #28 wire. I am reading the transformer
> section in _The ARRL Handbook_, and I notice that some of the
> important parameters include the efficiency factor, core
permeability,
> and coupling coefficient.
>
> Can anyone tell me the process you go through when substituting
> transformers? It seems to me that if you know what frequency RF the
> transformer will be handling, the amount of power it will handle and
> perhaps other performance factors, then you can understand what you
> need. It also seems to me that these performance parameters are
> determined by design parameters like the size of the core, the shape
> of the core, the permeability of the core, the thickness of the
wires,
> the number of turns used, and perhaps one or two more factors I am
> overlooking.
>
> Can anyone shed some more light on just what performance
requirements
> you have for a transformer and how you decide on the design
> parameters? I think the parts listed for projects in the ARRL books
> were chosen because the individual author of the project had an
excess
> inventory of the parts or was able to find these parts at his/her
> particular Radio Shack at the time. But then, what was widely
> available locally at one place and time may not be available here
and
> now.
>
> Jason Hsu, AG4DG
> jason_hsu_802701@@@yahoo.com
> http://www.jasonhsu.com/ham_radio-technical.html

2429. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-30 20:30:33 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CA62071.474F@pop.removethistomailme.net>
Source record: 45221

xpyttl wrote:
>
> "John Miles" <jmiles@pop.removethistomailme.net> wrote in message
> news:3CA53AAE.5082@pop.removethistomailme.net...
>
> > Reminds me of why I like Digi-Key.
>
> I have to say I'm a huge fan of DigiKey. While they are definitely not the
> low-priced spread, their prices aren't bad, and their customer service is
> nothing short of stellar.
>
> But they don't have much in the way of RF parts.

That's actually been changing over the past couple years. They actually
have a pretty decent selection of RF parts if you don't count specialty
items like bare toroid cores and the like. Probably 75% of what Dan
sells, although their prices on RF parts really are stratospheric
compared to Dan's.

Seems like every other DigiKey catalog I get has at least one new
distributor line added to it. It was certainly nice when they started
carrying Atmel microcontrollers....

> And for weird little bits of
> hardware, where else can you go?

eBay. :)

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2430. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-30 22:48:55 UTC
From: warren weber <hiview@worldnet.att.net>
Message-ID: <rhrp8.13887$se.1352938@bgtnsc04-news.ops.worldnet.att.net>
Source record: 45222

Gollywog <_eng@ilos.net> wrote in message
news:ud5p8.232019$kb.13109030@news1.calgary.shaw.ca...
>
> Anybody:
>
> What's up with Dan's Small Parts? I'm sitting on an order, waiting for the
> monthly change of catalog he mentions at http://www.fix.net/dans.html and
> there has been nothing since Feb 11/02. Worse yet I've tried 5 times
> (various days & times) and I can't get an answer on the phone. At this
point
> I'm glad I'm still holding the money order! I've done a google and there
> don't seem to be any complaints to date - what's up?
>
> Mike
> va4mgw

I buy from DigiKey and Newark. Both are very good firms to deal with. Warren

2431. Re: Can one substitute transformer wires and cores?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-30 23:05:59 UTC
From: k7itm@aol.com
Message-ID: <3200347.0203301505.69b2820d@posting.google.com>
Source record: 45223

jason_hsu@my-deja.com (Jason Hsu) wrote in message
news:<f7d9a152.0203300650.1ab54362@posting.google.com>...
> Although I am new to homebrewing, I already have a pet peeve: circuit
> projects that require parts that aren't available at Radio Shack or
> local electronics stores. ...

As a couple other posters noted, you've identified a real problem. If you are willing and able to accumulate a "junquebox" of parts, before long, you'll find you have on hand _most_ of the parts needed for many projects. Of course, you're likely to accumulate the parts that are most interesting to the type of project you gravitate toward. By the way, though I said "junquebox," you'll serve yourself very well if you put some time into organizing your stockpile. If you're willing to do surface-mount work, you'll find that you can put a LOT of parts into a small volume. I'm using inexpensive coin envelopes for many of my SMT parts, and a very few index-card file boxes (or similar) end up holding well-sorted sets of resistors and capacitors and the like.

As another poster mentioned, one partial solution is having a way to test things and find out if they work like the original design intended, even though you've had to use different parts. It's certainly possible to build some very helpful test equipment, if you can't afford to buy it, but also as you learn more you may be able to get to a point where you can change designs, or make your own designs, and know they will work because you designed them to. I think it's an iterative process: you build, test, learn, try things on your own, learn from them, learn to glean more out of someone else's design than just copying it, etc.

If you can talk yourself into space for parts storage, you can surely get lots of cheap parts by taking apart boards. As you build some things, you'll note that some parts are used over and over...certain resistor values, capacitors for bypassing where the value isn't critical, etc., and you can think about buying those in hundreds (or maybe even more) and get them a LOT cheaper than if you try to buy them in singles.

And then there are some "old farts" like me who have way more parts than we'll ever use...if I could find a local 'sperimenter who wanted parts and had a plan that involved learning something along the way, I'd be more than happy to supply the parts, and consultation too if asked. But it seems like there aren't a lot of people really interested in trying to build things from scratch.

Cheers,
Tom

2432. help needed with Yaesu FT-101ee

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-30 23:27:18 UTC
From: AB Brown <abbrown@nospammail.com>
Message-ID: <a85hj6olt1@slb6.atl.mindspring.net>
Source record: 45224
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I just burned out a final tube (6JS6C) in my Yaesu FT-101ee today. I wasn't sure of the cause and still am not, but when I placed the bandswitch in the 160 meter position, and with the heater activated, the radio lights went dim. By the time I switched bands, the one final tube was gone. This all happened without activating the PTT. I wanted to find out what happened, so I reinstalled the good and bad tube and duplicated the conditions: 160 meters, heater on, PTT not activated. Immediately, the lights dimmed once again and the IC soared to over 0.15 mA with the bad tube in place. None of the other bands cause this problem. With the tubes removed, the "short" doesn't occur on 160. What can be the problem? At first, I thought the tubes but why wouldn't the other bands cause the same results? I did recently rewire the transceiver to enable the CW position to be able to use the AM filter. Could a rewiring mistake cause the symptoms on 160? Note that I also get a strong CW sidetone when the bandswitch is in the 160 position and mode on CW. This is only when the tubes are in place. Heater on and PTT not activated.

Can anyone help me figure out what the heck is going on?

Thanks,
AB

2433. National NCX-5 Manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-30 23:44:32 UTC
From: Denis Cote <w1wv@attbi.com>
Message-ID: <A5sp8.44835$44.17831896@typhoon.ne.ipsvc.net>
Source record: 45259

Before I send these to the paper shredder, I have For Sale the following:

1) National NCX-5 Transceiver manual
2) National NCX-A Power Supply/Speaker manual
3) Raymond Sarrio Co., National NCX-5 Service Notes.

All above are photocopies in very clear and new like condition. I am asking $15.00 for the package which will included postage.

Contact, Denis W1WV at the following:
w1wv@attbi.com

2434. Ten meter tuner outcome

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-31 00:28:26 UTC
From: jwodell@provide.net
Message-ID: <3ca7574f.2223911@news.provide.net>
Source record: 45234

A while back I posted a not to the effect that I would like
to build a 10 meter antenna tuner.

Thanks to all the people who replied. One fellow in England was
particularly helpful.

I sort of solved it myself. I have a tiny MFJ tuner, and it works fine
on ten. So it is indeed the size of the beast. Bigger ones have
longer wires, more stray junk, and so they don't like ten meters.

I've even figured out how to design one. I just don't know the range
of resistive and reactive components that a t-network should cover.
I think my old Millen tuner does tell you what it will handle..

Thanks again to all

73 jerry w8gnd

2435. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-31 00:55:22 UTC
From: caveteursus@aol.com
Message-ID: <20020330195522.07993.00000974@mb-cr.aol.com>
Source record: 45225

There are "horses for courses" and a lot of these small companies are
invaluable in their niches.

2436. Re: QRP transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-31 01:44:14 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <ORtp8.31101$q92.923165@news1.east.cox.net>
Source record: 45226

Check the Vectronics website.

Pete

"gil" <gilpi@mindspring.com> wrote in message
news:a84etv$e9s$1@nntp9.atl.mindspring.net...
> Im interested in building a very simple CW QRP transmitter for 40, 30 or
20
> m
> Any guidance, web sites or plans appreciated
>
> Gil
>
>
>

2437. Re: help needed with Yaesu FT-101ee

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-31 04:32:01 UTC
From: wb9hnj@yahoo.com
Message-ID: <299bc5a9.0203302032.1ed7b412@posting.google.com>
Source record: 45227
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

"AB Brown" <abbrown@nospammail.com> wrote in message
news:<a85hj6olt1@slb6.atl.mindspring.net>...
> I just burned out a final tube (6JS6C) in my Yaesu FT-101ee today. I wasn't
> sure of the cause and still am not, but when I placed the bandswitch in the
> 160 meter position, and with the heater activated, the radio lights went
> dim. By the time I switched bands, the one final tube was gone. This all
> happened without activating the PTT. I wanted to find out what happened, so
> I reinstalled the good and bad tube and duplicated the conditions: 160
> meters, heater on, PTT not activated. Immediately, the lights dimmed once
> again and the IC soared to over 0.15 mA with the bad tube in place. None of
> the other bands cause this problem. With the tubes removed, the "short"
> doesn't occur on 160. What can be the problem? At first, I thought the
> tubes but why wouldn't the other bands cause the same results? I did
> recently rewire the transceiver to enable the CW position to be able to use
> the AM filter. Could a rewiring mistake cause the symptoms on 160? Note
> that I also get a strong CW sidetone when the bandswitch is in the 160
> position and mode on CW. This is only when the tubes are in place. Heater
> on and PTT not activated.
>
> Can anyone help me figure out what the heck is going on?
>
> Thanks,
> AB

Mine did the same thing...the tubes went into self oscillation when
power was applied and they were executed in the proccess (well one was
anyway). Nothing was wrong with the radio...check the output PI
network for any damage caused and replace the finals..if you use
Sylvanias replace the 100pf cap in sreies with the neutralization
variable with a 10pf silver mica piece.

2438. Re: help needed with Yaesu FT-101ee

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-31 04:40:36 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <8rwp8.141735$7b.13010803@bin7.nnrp.aus1.giganews.com>
Source record: 45228
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

It appears you have a defective tube that just happened to go bad when you switched bands. Remove the bad tube and see if it's okay.

73, Bob

2439. Re: help needed with Yaesu FT-101ee

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-31 05:35:29 UTC
From: AB Brown <abbrown@nospammail.com>
Message-ID: <a8675ipqm1@nntp9.atl.mindspring.net>
Source record: 45229
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

> Mine did the same thing...the tubes went into self oscillation when
> power was applied and they were executed in the proccess (well one was
> anyway). Nothing was wrong with the radio...check the output PI
> network for any damage caused and replace the finals..if you use
> Sylvanias replace the 100pf cap in sreies with the neutralization
> variable with a 10pf silver mica piece.

Thanks Art. I also noticed that, while unkeyed on 160 meter position, I get CW sidetone through the speaker, when switched to CW mode, with the good and bad tube still in place. The sidetone doesn't start until the tubes start warming up. Of course, none of these symptoms are present when I remove the tubes.

A strange, very isolated phenomenon to say the least! At first, I thought I rewired the switch incorrectly after installing the AM filter, but then the symptoms wouldn't occur once the tubes were removed.

I just received this radio by mail a few weeks ago and the tubes weren't removed during shipment. I wonder if this could have weakened them. Before I even modified the switch, I had to replace several components in the bias network because the current had soared.

AB

2440. Re: help needed with Yaesu FT-101ee

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-31 05:48:29 UTC
From: George Csahanin <georgec@dyb.com>
Message-ID: <Nqxp8.6267$eo6.1883524147@newssvr11.news.prodigy.com>
Source record: 45230
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Just looked over the manual, stared at it for a while, and not knowing exactly what you did to enable cw thru am filter, can suggest to check for obvious wiring mistakes. But further, with PA tubes pulled, can you get a wattmeter hooked to the "RF OUT" jack? This is the low level driver output for a transverter, etc. Should be on the rear next to the ground terminal. I suspect that for some reason you get the sidetone osc enabled with no key connection(which I recall trips the vox and keys the rig), and this is just blasting full drive to an untuned PA. Remember, the tuning is VERY broad on 160. You'll get drive no matter where the drive tuning is set, in my experience. It may not have done this on other bands simply because the setting of the driver tuning was not peaked for that spot on the band.

However, the only in 160 thing about sidetone really suggests a wiring mistake, that you'll need to trace.

Hope you find it. These are fine radios, I have three...

--
George Csahanin
Austin, TX
92 Red/Red C4 LT-1
W2DB

"When man perpetrates a total fiasco he does it logarithmically" - the late Jean Shepard K2ORS
"AB Brown" <abbrown@nospammail.com> wrote in message news:a85hj6olt1@slb6.atl.mindspring.net...
> I just burned out a final tube (6JS6C) in my Yaesu FT-101ee today. I wasn't
> sure of the cause and still am not, but when I placed the bandswitch in the
> 160 meter position, and with the heater activated, the radio lights went
> dim. By the time I switched bands, the one final tube was gone. This all
> happened without activating the PTT. I wanted to find out what happened, so
> I reinstalled the good and bad tube and duplicated the conditions: 160
> meters, heater on, PTT not activated. Immediately, the lights dimmed once
> again and the IC soared to over 0.15 mA with the bad tube in place. None of
> the other bands cause this problem. With the tubes removed, the "short"
> doesn't occur on 160. What can be the problem? At first, I thought the
> tubes but why wouldn't the other bands cause the same results? I did
> recently rewire the transceiver to enable the CW position to be able to use

> the AM filter. Could a rewiring mistake cause the symptoms on 160? Note
> that I also get a strong CW sidetone when the bandswitch is in the 160
> position and mode on CW. This is only when the tubes are in place.
Heater
> on and PTT not activated.
>
> Can anyone help me figure out what the heck is going on?
>
> Thanks,
> AB
>
>

2441. Home Brew Antenna Analyser

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-31 07:34:43 UTC
From: Brian Reay <brian.reay@bigfoot.com>
Message-ID: <YYyp8.24957$gj7.4141552@news2-win.server.ntlworld.com>
Source record: 45231

Hi,

I'm thinking of building a antenna analyser- the commercial ones seem pricey for what they are and the principles don't seem that complicated. Anyone already tried this for VHF (and UHF)? I've seen the website for a LF verison but my interest is more 50MHz > 146MHz and (idealy) 430>440MHz.

73

Brian

--
Brian Reay
www.g8osn.org.uk

2442. Q of two coils in series

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-31 11:25:28 UTC
From: la8ak.xnd@online.no
Message-ID: <3ca65859.30988286@news.online.no>
Source record: 45232

Hi

What is the formula for calculating Q of two coils in series? In this case I wish to connect a 1.8mH coil (Q=650) in series with a 150�H coil (Q=50)
I am quite aware of calculating series resistance and adding for the two coils, ending up with Q=435 on 150kHz, but hoped it was an easier way for the next calculation

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

2443. Re: QRP transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-31 11:53:01 UTC
From: poissondanlo@aol.com
Message-ID: <20020331065301.20605.00000964@mb-mn.aol.com>
Source record: 45233

http://homepage.eircom.net/~ei9gq/
http://www.qrp.pops.net/
http://pmp3.net/harry

again ?
73's
Serge /F5JTM

2444. Re: Ten meter tuner outcome

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-31 13:35:08 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <3CA71090.420425BC@amsat.org>
Source record: 45235

A side note -- did u check the power at the input to the tuner --- then
the output??
Those tiny tuners can soak up power.
Some get downright hot and arc over with too much input power.
-
73 From AC6V, Rod In Oceanside, CA
I doubt, therefore I might be!

AC6V Mega Ham Index at http://ac6v.com
AC6V Book For DXers at http://ac6v.com/DXSAMPLE.htm
==========
"Jerry W. O'Dell" wrote:

> A while back I posted a not to the effect that I would like
> to build a 10 meter antenna tuner.
>
> Thanks to all the people who replied. One fellow in England was
> particularly helpful.
>
> I sort of solved it myself. I have a tiny MFJ tuner, and it works fine
> on ten. So it is indeed the size of the beast. Bigger ones have
> longer wires, more stray junk, and so they don't like ten meters.
>
> I've even figured out how to design one. I just don't know the range
> of resistive and reactive components that a t-network should cover.
> I think my old Millen tuner does tell you what it will handle..
>
> Thanks again to all
>
> 73 jerry w8gnd

-

2445. Re: Q of two coils in series

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-31 15:21:26 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0203310721.334aa2b6@posting.google.com>
Source record: 45236

la8ak.xnd@online.no (J M Noeding) wrote in message
news:<3ca65859.30988286@news.online.no>...

> Hi

> What is the formula for calculating Q of two coils in series? In
> this case I wish to connect a 1.8mH coil (Q=650) in series with a
> 150uH coil (Q=50)

> I am quite aware of calculating series resistance and adding for
> the two coils, ending up with Q=435 on 150kHz, but hoped it was an
> easier way for the next calculation

> 73
> Jan-Martin
> LA8AK

Jan-Martin,

Problems like these can be solved using a spreadsheet, but I prefer Mercury since the formulas are entered in the form that is the most convenient, and Mercury solves for the unknowns. You can also add comments to each line in Mercury to show the purpose. This makes it easy to understand the calculations later instead of having to figure out what each cell refers to in a spreadsheet.

After entering the equations, you can save them to a file to provide a permanent record of the calculation. You can easily update it for different values.

Here is the result using your data, assuming no mutual coupling between the inductors:

```
Problem: C:\EU\XL.002
; inductive reactance, Q of coils in series

pi = ï¿½ ; enter 3.141...
L1 = 1.8e-3 ; first inductor value
Q1 = 650 ; first inductor Q
L2 = 150e-6 ; second inductor value
Q2 = 150 ; second inductor Q
F = 150e3 ; operating frequency

XL1 = 2 * pi * F * L1 ; calculate reactance of L1
XL2 = 2 * pi * F * L2 ; calculate reactance of L2
XT = XL1 + XL2 ; get total reactance
```

```
R1 = XL1 / Q1 ; calculate resistance of L1
R2 = XL2 / Q2 ; calculate resistance of L2

RT = R1 + R2 ; get total resistance in series
QT = XT / RT ; calculate total Q

Solution
L1 = +0.001800000000000000
Q1 = +650.00000000000000
L2 = +0.000150000000000000000
Q2 = +150.00000000000000
F = +150000.00000000000
XL1 = +1696.46003293849
XL2 = +141.371669411541
XT = +1837.83170235003
R1 = +2.60993851221306
R2 = +0.942477796076938
RT = +3.55241630829000
QT = +517.34693877551

This shows the Q is slightly higher than your value of 450.

Mercury is an update of Borland's Eureka 1.0 for the IBM PC, and
runs in DOS. You can get it at

http://archives.math.utk.edu/software/msdos/calculus/mrcry209/.html

(Yes, the url is correct:)

Best Regards, Mike
```

2446. Re: Q of two coils in series Oops!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-31 15:35:38 UTC
From: Mike Monett <mrmonett@yahoo.com>
Message-ID: <3CA72CCA.EA6@yahoo.com>
Source record: 45237

Mike Monett wrote:

[...]

Mercury also makes it easy to find mistakes, such as my typo when
entering the Q of the second inductor. Here is the revised calculation:

```
L1 = 1.8e-3 ; first inductor value
Q1 = 650 ; first inductor Q
L2 = 150e-6 ; second inductor value
Q2 = 50 ; second inductor Q <--- typo corrected
F = 150e3 ; operating frequency

Solution
L1 = +0.001800000000000000
Q1 = +650.00000000000000
L2 = +0.0001500000000000000
Q2 = +50.000000000000000
F = +150000.00000000000
XL1 = +1696.46003293849
XL2 = +141.371669411541
XT = +1837.83170235003
R1 = +2.60993851221306
R2 = +2.8274333882308
RT = +5.4373719004439
QT = +338.000000000000
```

Now the Q is lower than your value!

That little 150uH really kills the performance.

Best Regards, Mike

2447. help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-31 15:57:07 UTC
From: Xu <salers@hamal.freemail.ne.jp>
Message-ID: <a87blr$so8$1@mail.cn99.com>
Source record: 45238

Hi!
I'm planing to home made a
RF power amplifier.But in
our country I can not get Amidon's products(FT series), I can
get the torid core, some of them ,can work in 0.5-30MHz,
but"Mi"is too low,only have50-100,not as FT series of Amidon.
my question is:
How can I
I use them in HF power amplifier as transformer and
LBF inductor replace FT and T series?
I think I can not use the brass tubes in the transformer
of HF power amplifier because of it
has verylow Mi.
Thanks in advance
73! Xu

2448. Re: QRP transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-31 19:27:57 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uaeqlohtjgu95@corp.supernews.com>
Source record: 45240

Check the links at http://www.qrparci.org - there are dozens of them.

Also, take a look at the Fireball 40 on the NJQRP site - I think they still have the manual there. They sold it as a kit, maybe still do, but it's pretty simple.

For a transmitter only, it's pretty simple as long as you don't need a lot of frequency agility. A crystal oscillator or VXO, followed by a simple amp and some filtering is all it takes. If you want significant frequency agility, tho, the VFO itself can be a bit of a challenge. Take a look at NorCal's SMK-1. They don't sell the kit anymore but the schematic is typical of a pretty minimalist rig - they use a VXO with not a lot of movement. For another ratchet up in complexity, look at K8IQY's 2N2/40 - both are transceivers, but you can certainly rip off the transmitter circuitry. I don't know if it's anywhere online, but the G-QRP circuit handbook shows a "G3XMI Crystal Bender" which gives quite a lot of range on 40 from a VXO. Also, there's a ton of stuff in W1FB's QRP Notebook from the League.

..

"gil" <gilpi@mindspring.com> wrote in message
news:a84etv$e9s$1@nntp9.atl.mindspring.net...
> Im interested in building a very simple CW QRP transmitter for 40, 30 or
20
> m
> Any guidance, web sites or plans appreciated
>
> Gil
>
>
>

2449. Re: help needed with Yaesu FT-101ee

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-31 19:38:11 UTC
From: AB Brown <abbrown@nospammail.com>
Message-ID: <a87ohi$b8f$1@slb2.atl.mindspring.net>
Source record: 45239
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

George,

Thanks for the tips. I'm relatively new to the Yaesu series, so any advice is helpful here.

After I installed the AM filter in place of the CW filter, I rewired the switch according to some instructions I received, which I believe are from the Fox-Tango group. However, I received 2 sets of instructions and both are different, unfortunately. The first time I rewired the switch, I had CW sidetone on all bands and both in receive and transmit. Going by the other instruction sheet, I eliminated the sidetone and everything seemed normal until I went to the 160 position and that's when my problems started. BTW, I will post a drawing of the switch rewiring arrangement if you wish.

I removed the 2 final tubes. I still get normal RF drive and modulation on all bands. However, everything on 160 is ok until I switch to CW. I then get sidetone on receive as soon as I switch the heater on. With the heater off, I don't get sidetone. I get transmit modulation on all mode settings, including CW! No sidetone present during modulation. Time to recheck the switch rewiring!

AB

----------snip----------
o enable cw thru am filter, can suggest to check for
> obvious wiring mistakes. But further, with PA tubes pulled, can you get a
> wattmeter hooked to the "RF OUT" jack? This is the low level driver output
> for a transverter, etc. Should be on the rear next to the ground terminal.
I
> suspect that for some reason you get the sidetone osc enabled with no key
> connection(which I recall trips the vox and keys the rig), and this is
just
> blasting full drive to an untuned PA. Remember, the tuning is VERY broad
on
> 160. You'll get drive no matter where the drive tuning is set, in my
> experience. It may not have done this on other bands simply because the
> setting of the driver tuning was not peaked for that spot on the band.
>
> However, the only in 160 thing about sidetone really suggests a wiring
> mistake, that you'll need to trace.
>

2450. Re: Home Brew Antenna Analyser

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-31 19:38:49 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uaeqlofmrf6296@corp.supernews.com>
Source record: 45241

The principle is the same, so if you rip off the circuit from an HF analyzer you just need to futz with the directional coupler to make it reasonably good at VHF. I doubt sensitivity will be an issue, you just need to work out the mechanics so the thing doesn't look like a short at VHF/UHF. You may also want some faster diodes but this shouldn't be a big deal.

If you already have an SWR bridge, I'd work out the coupler first. Just build yourself 2 dummy loads, a 50 ohm and a 100 ohm with enough power for your transmitter (at it's lowest power probably). I would simply fool with the geometry until I got the SWR of the coupler down to something tolerable. I doubt you will have any trouble with sensitivity - it seems pretty easy to get a few volts of RF out of one of those things. You need the 100 ohm dummy load to satisfy yourself you can sense the reverse voltage as well as the forward. Also, you will use it to calibrate your analyzer - it should show a 2:1 resistive SWR.

If you don't have an RF voltmeter you can build an RF probe easy enough to prove it works before you go building up the analyzer circuitry.

Also, be careful about the resistors. QQ this quarter had an article showing "noninductive" resistors with like a 10:1 SWR at 6 meters, even though they were reasonably flat at 80.

..

"Brian Reay" <brian.reay@bigfoot.com> wrote in message
news:YYyp8.24957$gj7.4141552@news2-win.server.ntlworld.com...
> Hi,
>
> I'm thinking of building a antenna analyser- the commercial ones seem
pricey
> for what they are and the principles don't seem that complicated. Anyone
> already tried this for VHF (and UHF)? I've seen the website for a LF
verison
> but my interest is more 50MHz > 146MHz and (idealy) 430>440MHz.
>
> 73
>
> Brian
>
>
> --
> Brian Reay
> www.g8osn.org.uk
>
>

>

2451. Unknown receiver kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-31 21:45:15 UTC
From: sparky@cet.com
Message-ID: <3ca78259.5319046@news.cet.com>
Source record: 45242

I picked up an old homebrew receiver a couple days ago at a yard sale. The old man said he made it from a kit, but doesn't remember who made the kit. It is a 2-tube regen (6SN7, 6AW8A), and uses plug-in coils. There are only two knobs: tuning and regen, no volume. Does this radio sound familiar to anyone? Any clue as to what the kit might have been?

2452. Monthly Junkbox Parts Sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-31 22:07:06 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <dELp8.1355$Mx3.254200@news1.iquest.net>
Source record: 45243
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

```
Junkbox Surplus Parts for Sale as of 04/01/02
==============================================
NEW stuff!!

LM78L62ACZ Volt regulators, TO92 format 5/$3.00 10/$5.00

SMT2222's - Surf Mount 2N2222 NPN's - 200/$5
SMT4403's - Surf Mount 2N4403 PNP's - 200/$5

470pf 5% surf mount caps - 200/$5
1000pf 20% surf mount caps - 200/$5

9.8304 Mhz Crystals, 1/4 in tall - I have 500 - make me an offer.

27mH inductors with radial leads - I have 1000 - make me an offer.

================================================

Caps - All new, old stock. No pulls.
====================================
NEW .1 uF Poly/Film caps - 10% 250v, new stock, paper tape, nice
long leads. These are not NPO and are made by S&M Components
50/$3.00 or 100/$5.00

.01 uF ceramic caps, 10% 100v brand new by Kyocera
50/$3 or 100/$5

3300pf ceramic caps, 10% 50v
50/$3 or 100/$5

1000pf blue mono caps, 10% 100v
50/$3 or 100/$5

470pf ceramics on paper tape, rated 5% (NPO)
50/$3 or 100/$5

12pf NPO ceramics on tape
50/$4 or 100/$7

Voltage Regulators
==================
L7805ACV voltage regulators TO220 case. 5 for $4.00
L7806CV voltage regulators. TO220 case. 5 for $4.00
LM7812T voltage regulators. TO220 case. 5 for $4.00

LM317T Adjust. Positive Voltage Regulator TO220. 6 for $5.00
```

Key/Headphone Jacks
==========
These are 3.5mm female stereo PCB mount jacks. Can be used in
ugly/manhattan building projects with no problems.
3/$1.35 (or send a buck and a stamp)

Transistors
==========
TP2222 plastic TO92 NPN - NEW PARTS (House brand 2N2222)100/$7 50/4.00
2N3906's plastic TO92. PNP - 50/4.00 NEW PARTS
2N3704's plastic TO92, NPN - 50/4.00 NEW PARTS
2N7000 MOSFET - 5/$2

IRF540's TMOS Power FET, N-Channel, 27A, 100v RDS(on) = .070 Ohms
http://www.onsemi.com/pub/Collateral/IRF540-D.PDF
for data sheet - $1.00 each.

BC847B - Surface Mount NPN's, general purpose
CBO = 50v, CEO = 45v, EBO = 6v, Collector Current Max = 100 mA,
electrical characteristic curves for this unit are the same as the
PN2222A, SST222A, MMST2222A, and UMT222A transistor. These are new
stock, on SM tape.
200pc/$5.00

Op AMPS, Comparators
==========
LM741CN - Single Op Amp, 8 Pin Dip, 4 for $1.50
http://www.hep.ph.ic.ac.uk/~hallg/Instrumentation/Data/LM741.pdf

BA4558 - Dual Op Amp, 8 Pin Dip, 4 for $1.50
http://www.rohm.com/products/databook/standard/pdf/ba4558.pdf

BA10324 - LM324 equiv Quad Ground Sense Op Amp 14 pin, 4 for $1.50
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10358 - Dual Ground Sense Op Amp, 8 pin, 4 for $1.50
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10393 - Dual Comparator 8 pin dip, 4 for $1.50
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10339 - Quad Comparator 14 pin, 4 for $1.50
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA4560 - Dual High Slew Op Amp, 4 for $1.50
http://www.rohm.com/products/databook/standard/pdf/ba4560.pdf

Diodes
======
1N4148 - You always need these. 75 for $2.00 These are NEW.

Let me know if you're interested. All prices are post paid to the
USA, unless otherwise noted. I will ship to non USA addresses but we
need to discuss the shipping charges first.

--

==
KB9BVN/QRP - New Whiteland IN - EM69WN
QRP-ARCI #10223 QRP-L #1540 FIST #5695
FISTS CC #764 - Proud Member ARRL
HEATH HW-9 @ 2W or NORCAL 40A @ 1.3W
INTO INFAMOUS AF4PS ATTIC DIPOLE
SOC #400 AND FLYING PIGS QRP #-57
==

2453. Re: QRP transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-31 22:14:14 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <UKLp8.1356$Mx3.254157@news1.iquest.net>
Source record: 45244

The Arkansas QRP Club sells the original Tuna Tin 2 kit for $12.00....grab
that and you're on 40m in about an hour.

Here is a great place to look at one:

http://clocksusa.com/tuna/tt2page1.html

The Tuna Tin 2 is now available in kit form from the Ft. Smith QRP Group.
Your cost just $12 U.S. each which includes shipping/handling.
Group buys of 10 or more $10 each and shipping is on them. Foreign $15 U.S.
Make checks payable to jay Bromley

Jay Bromley W5JAY

9505 Bryn Mawr Circle

Fort Smith, AR 72908-9276

" Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message
news:ORtp8.31101$q92.923165@news1.east.cox.net...
> Check the Vectronics website.
>
> Pete
>
> "gil" <gilpi@mindspring.com> wrote in message
> news:a84etv$e9s$1@nntp9.atl.mindspring.net...
> > Im interested in building a very simple CW QRP transmitter for 40, 30 or
> 20
> > m
> > Any guidance, web sites or plans appreciated
> >
> > Gil
> >
> >
> >
>
>

2454. Re: QRP transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-31 23:12:38 UTC
From: Mike Rofon <TheRealExray@netscape.net>
Message-ID: <3CA797E6.D65B1E34@netscape.net>
Source record: 45245

Scrounger wrote:
>
> The Arkansas QRP Club sells the original Tuna Tin 2 kit for $12.00....grab
> that and you're on 40m in about an hour.
>
> Here is a great place to look at one:
>
> http://clocksusa.com/tuna/tt2page1.html
>
> The Tuna Tin 2 is now available in kit form from the Ft. Smith QRP Group.
> Your cost just $12 U.S. each which includes shipping/handling.
> Group buys of 10 or more $10 each and shipping is on them. Foreign $15 U.S.
> Make checks payable to jay Bromley
>
> Jay Bromley W5JAY
>
> 9505 Bryn Mawr Circle
>
> Fort Smith, AR 72908-9276

What a cute page! I worked a VK6 on one of these things, 12,000 miles!
-Bill WX4A

2455. Re: QRP transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-31 23:57:33 UTC
From: Mike Rofon <TheRealExray@netscape.net>
Message-ID: <3CA7A26D.CFD48BAB@netscape.net>
Source record: 45247

Scrounger wrote:
>
> You worked 12K miles on a quarter watt with a world famous W1FB Tuna TIn 2
> transmitter?
>
> OUTSTANDING!!
>
> My best DX on mine is about 700 miles with 230 mW and my attic dipole.

Yep, I swear to it and even got a QRP Club 'Miles-Per-Watt' certificate
for the feat. It was 15-20 years ago but I can recall it well. I got
an astounding 569....of course he was thumping in.

-Bill

2456. Re: QRP transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-03-31 23:58:38 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <MgNp8.1358$Mx3.254634@news1.iquest.net>
Source record: 45246

You worked 12K miles on a quarter watt with a world famous W1FB Tuna TIn 2 transmitter?

OUTSTANDING!!

My best DX on mine is about 700 miles with 230 mW and my attic dipole.

"Mike Rofon" <TheRealExray@netscape.net> wrote in message news:3CA797E6.D65B1E34@netscape.net...
> Scrounger wrote:
> >
> > The Arkansas QRP Club sells the original Tuna Tin 2 kit for $12.00....grab
> > that and you're on 40m in about an hour.
> >
> > Here is a great place to look at one:
> >
> > http://clocksusa.com/tuna/tt2page1.html
> >
> > The Tuna Tin 2 is now available in kit form from the Ft. Smith QRP Group.
> > Your cost just $12 U.S. each which includes shipping/handling.
> > Group buys of 10 or more $10 each and shipping is on them. Foreign $15 U.S.
> > Make checks payable to jay Bromley
> >
> > Jay Bromley W5JAY
> >
> > 9505 Bryn Mawr Circle
> >
> > Fort Smith, AR 72908-9276
>
> What a cute page! I worked a VK6 on one of these things, 12,000 miles!
> -Bill WX4A
>

2457. Re: Home Brew Antenna Analyser

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 01:48:04 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <a88etd$8jq$1@slb6.atl.mindspring.net>
Source record: 45248

There are a couple of choices for methodology... Either use a single frequency source which you can set to the desired frequency, or a wideband noise generator.

If you have a signal generator, I'd suggest a CAREFULLY consructed toroid bridge and I would use AD8307 log amp chips for the detectors.

Diode detectors get non-linear and show "odd" responses depending on drive level. Kinda hard to get a number that can be trusted.

AD8307 chips repond up to 600 MHz and are truely logarithmic.

Check the kanga website:

http://www.bright.net/~kanga/kanga/

They have the kit of parts for the logamp power detector.

==========

If you build a wideband noise generator, you could either use a receiver or, better yet, a spectrum analyzer to look at the return signal.

A spectrum analyzer can show where the match is in terms of frequency, and how good the match is as well.

So, a wideband noise generator, a toroid bridge, and a spectrum analyzer can tell you a lot about how the antenna is performing.

Jim Pennell
N6BIU

2458. Need schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 02:26:31 UTC
From: jeff <wd4nmq@earthlink.net>
Message-ID: <3CA7D379.4A16C1ED@earthlink.net>
Source record: 45249
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

I am looking for the schematic for a Heathkit 2718 tri-power supply.
Can anybody help?

--
Jeff, wd4nmq
wd4nmq@earthlink.net
http://home.earthlink.net/~wd4nmq
iLink client node #10438, iLink sysop link node #14746

2459. Looking for spec on TS-940 "Acc" I/F

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 03:12:00 UTC
From: ai928@FreeNet.Carleton.CA
Message-ID: <a88j60$8u0$1@freenet9.carleton.ca>
Source record: 45250
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hi.

If you follow-up to one of these newsgroups, could you please CC.
your reply to my E-mail address, if possible?

I recently purcased a used TS-940. Although the manual was included,
it was not very forthcoming about the details of the two "Accessory
terminals". "ACC1" is a 6-pin DIN connector and the manual has no
information whatsoever about this connector. "ACC2" is a 13-pin
DIN connector and, although the manual at least labels these pins,
it has no information on how to use its connections.

I am wondering if anyone can point me to any internet-accessible
interface protocol specification for these two connectors. I would
like to obtain enough information to home-brew a hardware interface
to the shack PC, and to write my own software for things like
controlling the TS-940 from the PC, automatic log entry of time,
frequency, etc., if this information is availablve through the
interface. In addition to any available protocol specification,
any articles, application notes, etc. would also be useful.

Thanks and regards.

VY 73 ES GUD DX,

Ed Pugh, VA3PU.
<ai928@freenet.carleton.ca>
--
Ed Pugh
Ottawa ON Canada

2460. Re: help needed with Yaesu FT-101ee

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 03:25:25 UTC
From: wb9hnj@yahoo.com
Message-ID: <299bc5a9.0203311925.49049fe7@posting.google.com>
Source record: 45251
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

```
">
> Thanks Art. I also noticed that, while unkeyed on 160 meter position, I get
> CW sidetone through the speaker, when switched to CW mode, with the good and
> bad tube still in place. The sidetone doesn't start until the tubes start
> warming up. Of course, none of these symptoms are present when I remove the
> tubes.
>
> A strange, very isolated phenomenon to say the least! At first, I thought I
> rewired the switch incorrectly after installing the AM filter, but then the
> symptoms wouldn't occur once the tubes were removed.
>
> I just received this radio by mail a few weeks ago and the tubes weren't
> removed during shipment. I wonder if this could have weakened them. Before
> I even modified the switch, I had to replace several components in the bias
> network because the current had soared.
>
> AB

Another very good posibility since you mentioned the bias reworking is
that the radio was at one time used on CB and is "cooked"...a lot of
these radios saw cb service at the 100 watt level and payed the price
for it. Check out an EXCELLENT ft-101 site at:

www.qsl.net/nw2m/ft101.html

Best site on the web of info.

Art
```

2461. Re: Home Brew Antenna Analyser

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 03:32:05 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <VwQp8.149007$af7.74472@rwcrnsc53>
Source record: 45252

> So, a wideband noise generator, a toroid bridge, and a spectrum
analyzer
> can tell you a lot about how the antenna is performing.

Sheeeesh! And to think, I worked 346 countries without those devices.

W4ZCB

2462. Re: Need schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 03:46:59 UTC
From: Walter <walter@accessus.net>
Message-ID: <TKQp8.360487$uv5.30709193@bin6.nnrp.aus1.giganews.com>
Source record: 45253

Hi Jeff, this should be both pages of the schematic,
http://www.continental.freeserve.co.uk/heath/ip-2718a.gif
http://www.continental.freeserve.co.uk/heath/ip-2718b.gif
73, Walter, AG5P

"jeff" <wd4nmq@earthlink.net> wrote in message
news:3CA7D379.4A16C1ED@earthlink.net...
> I am looking for the schematic for a Heathkit 2718 tri-power supply.
> Can anybody help?
>
> --
> Jeff, wd4nmq
> wd4nmq@earthlink.net
> http://home.earthlink.net/~wd4nmq
> iLink client node #10438, iLink sysop link node #14746
>

2463. Re: Home Brew Antenna Analyser

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 08:18:09 UTC
From: John Fletcher <John@kanga.demon.co.uk>
Message-ID: <hgFBeDABfBq8EwuE@kanga.demon.co.uk>
Source record: 45264

Hi Brian,

<snip>

>I've seen the website for a LF version (antenna analyser)

<snip>

where's that? I'm interested in doing one for a radio club project.

73,

John G4EDX
--
John Fletcher

2464. news in web page

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 09:05:51 UTC
From: Andrea <mezand@libero.it>
Message-ID: <iAUp8.103507$1S3.3286589@twister1.libero.it>
Source record: 45254

news in web page....data sheet,homebrew,manual,link surplus...ecc ecc

www.qsl.net/iw4cb

2465. Re: low freq PLL for jumpy FM carrier tracking?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 11:47:09 UTC
From: Jan Wagner <jwagner@cc.hut.fi>
Message-ID: <3CA848BD.20B84BA1@cc.hut.fi>
Source record: 45255

> > So the problem is, how to make it digitally tunable? i.e. shift the
> > 30kHz lock&track range up and down according to the users wishes (not
> > with a potentiometer! as it should be digital)...
>
> Since the VCO center is set by a resistance to ground, just synthesize
> that with a DAC controlled circuit.

Hmm... not a bad idea at all! Actually very good! Many thanks for the
tip!!! :o)

> Ah, then perhaps it would be good to design the coil so that it does
> not have so many nearby resonances! Surely there's not much advantage
> to them??

Yup, no advantage, but there isn't much that can be done about this...
Because of the high voltage, the coil must be air-cored and
single-layer. Ferrite cored and small would be nice of course, but it
is not practical here. The only thing is an optimum height-diameter
ratio. Well, anyway, see for example
http://ourworld.compuserve.com/homepages/alansharp/
http://ourworld.compuserve.com/homepages/alansharp/UK2001.htm
then you will know why... ;o)

cheers,
- Jan

--
****
high voltage at http://www.hut.fi/~jwagner/tesla

2466. Re: Looking for spec on TS-940 "Acc" I/F

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 13:07:05 UTC
From: Ken Ashcroft <ken@g3msw.demon.co.uk>
Message-ID: <11YP8AC5tFq8Ewt8@g3msw.demon.co.uk>
Source record: 45256
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

The TS 940 and the 950 are pretty similar. I think the manuals can be
downloaded, or e-mail me.
In article <a88j60$8u0$1@freenet9.carleton.ca>, Ed Pugh
<ai928@FreeNet.Carleton.CA> writes
>Hi.
>
>If you follow-up to one of these newsgroups, could you please CC.
>your reply to my E-mail address, if possible?
>
>I recently purcased a used TS-940. Although the manual was included,
>it was not very forthcoming about the details of the two "Accessory
>terminals". "ACC1" is a 6-pin DIN connector and the manual has no
>information whatsoever about this connector. "ACC2" is a 13-pin
>DIN connector and, although the manual at least labels these pins,
>it has no information on how to use its connections.
>
>I am wondering if anyone can point me to any internet-accessible
>interface protocol specification for these two connectors. I would
>like to obtain enough information to home-brew a hardware interface
>to the shack PC, and to write my own software for things like
>controlling the TS-940 from the PC, automatic log entry of time,
>frequency, etc., if this information is availablve through the
>interface. In addition to any available protocol specification,
>any articles, application notes, etc. would also be useful.
>
>Thanks and regards.
>
>
>VY 73 ES GUD DX,
>
>Ed Pugh, VA3PU.
><ai928@freenet.carleton.ca>
>--
>Ed Pugh
>Ottawa ON Canada

--
Ken Ashcroft

2467. www.on4cay.com updated ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 14:18:28 UTC
From: Ronny <tryit3@hotmail.com>
Message-ID: <U_Zp8.42816$DE4.5762@afrodite.telenet-ops.be>
Source record: 45257

Hi OMs,

I just had the 10.000st visitor to my website.
You can find there 45 megs of info, pics, video, ... on ATV, Meteosat,
soundcard packet, APRS, AirNav, freeware software, ...
So pay it a visit and enjoy, as did the previous 10.400 :)

73s de ON4CAY
Ronny
www.on4cay.com

2468. Re: Home Brew Antenna Analyser

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 15:40:36 UTC
From: la8ak.xnd@online.no
Message-ID: <3ca8755e.169514688@news.online.no>
Source record: 45258

On Mon, 01 Apr 2002 03:32:05 GMT, "Harold E. Johnson"
<W4ZCB@mchsi.com> wrote:

>> So, a wideband noise generator, a toroid bridge, and a spectrum
>analyzer
>> can tell you a lot about how the antenna is performing.
>
>Sheeeesh! And to think, I worked 346 countries without those devices.
>
>W4ZCB
>
>
suppose you did it before Ohm's Law and all those complex things?

--
remove ,xnd to reply

2469. Antenna for 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 16:34:47 UTC
From: Martin Wehner <martin@cyclotomic.com>
Message-ID: <3CA88C27.AC8A73D5@cyclotomic.com>
Source record: 45260

Hello All-

I am interested in building an antenna for a 2m handheld and have a few questions. Any input would be greatly appreciated.

The handheld I currently have is a Icom IC-T7H, 5W max output power. I am currently using the supplied Icom FA-1443B dual-band antenna (VHF/UHF).
I am interested in FM on 2m only and don't care if the antenna I build cannot do UHF.

Here are my questions:

(1) Do you even think it's worth doing it? Can a low-power radio such as mine even power a home-built antenna? Has anybody here used this transceiver with a home-built antenna before?

(2) I am very worried about damaging the radio. Are there any checks I can perform before hooking up my home-built antenna to the transceiver?

(3) Currently I am planning on building an antenna I found in the ARRL Handbook: the "1/4 lambda antennas for home, car and portable use" project (basically a vertical with ground-radials mounted at its base). Has anybody ever built that one? How well did it work?

(4) Do I need a balun for the antenna if fed with coax? If I do, how would I go about building/buying one? Is a balun just a transformer that matches the imepedance of the feed-line to the antenna impedance (e.g. if you use 75 Ohm feed-line, but use a 50 Ohm antenna, would you use a transformer with coil-resistances of 75 Ohm and 50 Ohm, and a turn-ratio of 1:1)?

(5) I also read the chapter about transmission lines and understand there is a problem with using long runs of coax for VHF frequencies. How long can I make my transmission line before a noticeable degradation occurs?

(6) What would I use for my transmission line? All I currently have at home is RG59/U coax from television installations. Does coax like that work? Should I definitely get a different kind? If so, where can I buy different coax (I live in San Diego, CA. I do know of two fun electronics places: Gateway Electronics and Murphy's in El Cajon)?

(7) What is the best place to buy the hardware from that I'll need for construction? The project in the Handbook calls for brass or steel rods. Does the Home Depot carry that kind of hardware? If not, I also know of an Ace Hardware store around here: would they carry it?

(8) I am planning on sticking the antenna out in my back-yard somewhere. Does anything speak against using a simple PVC pipe to raise the antenna off the ground?

(9) Does the antenna need to be connected to a ground rod? I guess I don't quite understand why some antennas do have to be and some don't. It seems that HF antennas need to be connected to a good ground system, whereas these don't.

Thank you for reading this far. I realize these are very basic questions, but we all have to start somewhere. Thank you for any and all input you may have.
73's

Martin

Martin Wehner (KG6KLF)

e-mail: <martin@cyclotomic.com>
web: http://www.cyclotomic.com/~martin

2470. Re: Home Brew Antenna Analyser

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 16:56:24 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <Ui0q8.149489$ZR2.64627@rwcrnsc52.ops.asp.att.net>
Source record: 45261

> >
> suppose you did it before Ohm's Law and all those complex things?

No, but a tape measure, wire and insulators were in vogue back then, as was common sense. I'm not sure as to why vector network analyzers, Boonton RX bridges and time domain reflectometers missed being named as additional tools needed to understand and use a radiator.

I do believe however that 3 or 4 of those entities came after OH2AQ and they played a part. (The rest were countries before that became so obviously dumb.)

W4ZCB

2471. WTB: Sommerkamp parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 17:12:05 UTC
From: Chris Wood <g0kmx@blueyonder.co.uk>
Message-ID: <Fx0q8.27281$2O2.1272636@news-binary.blueyonder.co.uk>
Source record: 45262

Hi there and thanks for reading this

I am attempting to refurbish a Sommerkamp TS788DX and am now looking for some final items:

Original Scanning / speaker fist microphone

Mobile mounting bracket

If you have any of these please contact me on the email addresses below.

Cash waiting for fully working and original items

Use: g0kmx@blueyonder.co.uk or chris.wood@medway-tr.sthames.nhs.uk

Many thanks

Chris (G0KMX)

2472. Re: Antenna for 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 17:37:27 UTC
From: w9wi@linux1.localdomain
Message-ID: <slrnaah7an.vhb.w9wi@linux1.localdomain>
Source record: 45263

On Mon, 01 Apr 2002 08:34:47 -0800, Martin Wehner <martin@cyclotomic.com> wrote:
>Here are my questions:
>
>(1) Do you even think it's worth doing it? Can a low-power radio such as
>mine even power a home-built antenna? Has anybody here used this
>transceiver with a home-built antenna before?

I've not tried that radio with a homemade antenna but there's no reason it
shouldn't work.

>(2) I am very worried about damaging the radio. Are there any checks I
>can perform before hooking up my home-built antenna to the transceiver?

I wouldn't be enormously worried about it. Radios have SWR protection
circuitry, it will cut power back if it detects something very wrong with
the antenna.

I presume that radio has out-of-band receive? I would check the NWS weather
radio frequencies between 162.4 and 162.55MHz. The local station in San
Diego should show a full-scale signal strength reading. (they're running a
LOT of power from a very good location!) I would expect to receive at least
one other station in that range though not being familiar with the San Diego
area, can't guarantee that.

If you hear the weather radio OK, I think you can be reasonably confident
the antenna is working well enough to not damage the radio.

>(4) Do I need a balun for the antenna if fed with coax? If I do, how
>would I go about building/buying one? Is a balun just a transformer that
>matches the imepedance of the feed-line to the antenna impedance (e.g.
>if you use 75 Ohm feed-line, but use a 50 Ohm antenna, would you use a
>transformer with coil-resistances of 75 Ohm and 50 Ohm, and a turn-ratio
>of 1:1)?

I've not used baluns with VHF antennas - I don't think it's necessary.

When you talk about 75 ohm feedline and 50 ohm antennas, you aren't talking
about resistance. If you take an ohmmeter to your antenna, you will read
infinity. (with some models of antenna, you'll read zero) 50/75 ohms are
impedances - valid only at the desired operating frequency. (your antenna
that's 50 ohms at 144MHz might be 3 ohms at 28MHz)

If you were to use 75-ohm feedline with a 50-ohm antenna, you would use a
1.5:1 balun at each end. (each end, because the radio is 50 ohms too)
Except again, I don't think it's necessary.

>(5) I also read the chapter about transmission lines and understand
>there is a problem with using long runs of coax for VHF frequencies. How
>long can I make my transmission line before a noticeable degradation
>occurs?

Depends on what grade of transmission line. RG-174 might only be good for a dozen feet or two. I use RG-213 on my 2m antenna, the feedline is about 50 feet long. Something better like 9913 would probably be a good idea but for what I do with it, my installation works well enough.

>(6) What would I use for my transmission line? All I currently have at
>home is RG59/U coax from television installations. Does coax like that
>work? Should I definitely get a different kind? If so, where can I buy
>different coax (I live in San Diego, CA. I do know of two fun
>electronics places: Gateway Electronics and Murphy's in El Cajon)?

RG-59 will certainly work. Except that you'll probably have a hard time getting the appropriate connectors on it. It is, as you mention, designed for TV work; most available connectors are of type F. You could use adaptors though those usually induce losses, sometimes severe losses. RG-59 is also 75-ohm impedance, so it will result in a slightly higher SWR. That said, 1.5:1 is not a big deal, I wouldn't let that inhibit me from using the 59.

I would be tempted to get something designed for ham work. RG-213 or 9913. There's a Ham Radio Outlet in San Diego that would carry that. (the other stores you mention might too, I'm not familiar with them)

>(8) I am planning on sticking the antenna out in my back-yard somewhere.
>Does anything speak against using a simple PVC pipe to raise the antenna
>off the ground?

As long as it's mechanically stable so that it won't come down, it should be fine. If you're putting up a ground-plane design like you describe, be sure the radials (the rods that stick out horizontally) are high enough that nobody will walk into them. You're probably going to have to use guy wires or ropes, I don't think a PVC pipe 8' long is going to stand vertically on its own.

>(9) Does the antenna need to be connected to a ground rod? I guess I
>don't quite understand why some antennas do have to be and some don't.
>It seems that HF antennas need to be connected to a good ground system,
>whereas these don't.

Some HF antenna designs use the earth as part of the antenna. A good ground system is important to performance; without it, it's like connecting a resistor in series with the antenna.

Most VHF antenna designs don't work that way; the entire antenna is self-contained. However, lightning and static buildup can still be an issue. I would still put a ground rod at the base of the PVC and connect it with a reasonably stiff wire (something like the #14 stuff used to wire electrical outlets) to the ground radials on the antenna. You don't need to bury radials like you would for an HF antenna though.

--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

2473. Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 18:11:16 UTC
From: AB Brown <abbrown@nospammail.com>
Message-ID: <a8a7qi$l5c$1@nntp9.atl.mindspring.net>
Source record: 45265
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

As most who read my posts are already aware, I have blown 6JS6C tubes in my FT-101ee. For replacement, I was going to try to obtain a matched replacement set until I found out the price. A well known firm just quoted GE and NEC prices for a matched pair of 6JS6C at $135 and $160, respectively. I recently purchased this FT-101 for $150, so it doesn't make much sense to spend more than I paid on a new set of tubes. So, I'm wondering about personal experiences converting to 6146B tubes, based on a fairly recent past QST article. Any successes, failures, or any other tips would be much appreciated.

Thanks,
AB

2474. PSU for PC from 12v car battery??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 19:07:49 UTC
From: Chris <chris@ilson.co.uk>
Message-ID: <1017688050.3709.0@eurus.uk.clara.net>
Source record: 45266

Hi all,

Thanks for taking the trouble to read this post.

I have a requirement to run a Desk top type PC base unit in my car, and wonder if anybody out there has tackled the problems of supplying the various voltages and currents from a 12 volt battery.

There are several companies able to supply Inverters that will do the job, but I have seen somewhere on the WWW where the motherboard was supplied from the cigar lighter socket. Can anybody point me to a solution please.

Thanks,

Chris G6KBC

chris@ilson.co.uk

www.ilson.co.uk

2475. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 19:27:53 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3CA8B4B9.6CB966B5@crosslink.net>
Source record: 45267
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

AB Brown wrote:
>
> As most who read my posts are already aware, I have blown 6JS6C tubes in my
> FT-101ee. ... Any successes, failures, or any other tips
> would be much appreciated.

No experience here but there is an article in my new ARRL Hints and
Kinks.
73, KA3DWW

2476. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 19:31:58 UTC
From: Joe Mama <joemama@prozac.net>
Message-ID: <c3chau8oviu859hdmh0912cfnbakk2u45j@4ax.com>
Source record: 45268
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Mon, 1 Apr 2002 13:11:16 -0500, "AB Brown" <abbrown@nospammail.com>
wrote:

> As most who read my posts are already aware, I have blown 6JS6C tubes in my
> FT-101ee. For replacement, I was going to try to obtain a matched
> replacement set until I found out the price. A well known firm just quoted
> GE and NEC prices for a matched pair of 6JS6C at $135 and $160,
> respectively. I recently purchased this FT-101 for $150, so it doesn't make
> much sense to spend more than I paid on a new set of tubes. So, I'm
> wondering about personal experiences converting to 6146B tubes, based on a
> fairly recent past QST article. Any successes, failures, or any other tips
> would be much appreciated.

I don't have a suggestion, but I have a comment. I remember when you could
get horizontal sweep tubes like 6LQ6, 6KD6, etc for about five bucks apiece,
and it wasn't all that long ago. Though the quality may not be equivalent
to domestic tubes, there are new [mostly audio] tubes coming out of China
and Russia for reasonable prices, and it really irritates the living heck
out of me to see these money-lusting opportunists driving the prices up on
American NOS just because there are idiots who will pay it while the rest of
us have to suffer without..

I don't know that you're gonna find 6146's any cheaper, cuz just about
twenty years ago you could rob them out an old commercial mobile rig or get
them from almost any local ham who had them laying around in the ham shack,
but from what I understand these are now difficult to find as well. Guys
used to give their old equipment away to people who needed it, but all of
sudden anything which is labeled as "vintage" or "obsolete" is made out of
gold, and people literally *hoard* it for the "collectibility" and make it
unaffordable to those of us who need it for practical or recreational use..

Fortunately, I have a selection of NOS audio and RF tubes to use as
replacements for my own equipment, cuz even though I can afford new tubes
i'd probably let my equipment sit on the shelf and gather dust before
catering to the "collectors" and greedy consumer slavemasters..

> Thanks,
> AB

-jm

1968 XLCH under construction
1984 XR-1000
1987 Jaguar XJ6 Vanden Plas

To return mail no spam, change the reply address to:

"joemama at rarebird dot net"

2477. Re: low freq PLL for jumpy FM carrier tracking?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 20:36:54 UTC
From: k7itm@aol.com
Message-ID: <3200347.0204011236.4cf5b477@posting.google.com>
Source record: 45269

Jan Wagner <jwagner@cc.hut.fi> wrote in message news:<3CA848BD.20B84BA1@cc.hut.fi>...

> > Ah, then perhaps it would be good to design the coil so that it does
> > not have so many nearby resonances! Surely there's not much advantage
> > to them??
>
> Yup, no advantage, but there isn't much that can be done about this...
> Because of the high voltage, the coil must be air-cored and
> single-layer. Ferrite cored and small would be nice of course, but it
> is not practical here. The only thing is an optimum height-diameter
> ratio. Well, anyway, see for example
> http://ourworld.compuserve.com/homepages/alansharp/
> http://ourworld.compuserve.com/homepages/alansharp/UK2001.htm
> then you will know why... ;o)

"The only thing is an optimum height-diameter ratio"?? I can think of quite a few other things you could vary. The obvious one that comes to mind is whether the winding is close-spaced or not, but there are surely others as well. There are some analogs with transmission lines and impedance transformations that are worth thinking about, I think. Perhaps the Tesla coil folk have thought all these things through a hundred times over, but it's always worth asking the question.

I'm glad to see from that reference that people are still using shock excitation. It can be quite efficient, actually. I understand that one of Marconi's later spark transmitters operated at somewhere around 1/3 of a megawatt output.

Cheers,
Tom

2478. Re: PSU for PC from 12v car battery??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 20:38:50 UTC
From: troglodite@aol.com
Message-ID: <20020401153850.01011.00001875@mb-cu.aol.com>
Source record: 45270

>
>There are several companies able to supply Inverters that will do the job,
>but I have seen somewhere on the WWW where the motherboard was supplied from
>the cigar lighter socket. Can anybody point me to a solution

There isn't a simple solution. Most desktops require 5v at several amps as well
as +12v and -12v. Unless you want to cannibalize your PC an inverter is
actually a cheap/workable solution.

2479. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 20:56:12 UTC
From: iron3@charter.net
Message-ID: <uahjelmim9t41b@corp.supernews.com>
Source record: 45274
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

```
Try Radio Electric Supply...(352)332-8881
I have a catalog with the 6JS6C for $39.00 each..Catalog is a few months
old..nice people..hope this helps.
"AB Brown" <abbrown@nospammail.com> wrote in message
news:a8a7qi$l5c$1@nntp9.atl.mindspring.net...
> As most who read my posts are already aware, I have blown 6JS6C tubes in
my
> FT-101ee. For replacement, I was going to try to obtain a matched
> replacement set until I found out the price. A well known firm just
quoted
> GE and NEC prices for a matched pair of 6JS6C at $135 and $160,
> respectively. I recently purchased this FT-101 for $150, so it doesn't
make
> much sense to spend more than I paid on a new set of tubes. So, I'm
> wondering about personal experiences converting to 6146B tubes, based on a
> fairly recent past QST article. Any successes, failures, or any other
tips
> would be much appreciated.
>
> Thanks,
> AB
>
>
```

2480. Re: PSU for PC from 12v car battery??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 21:00:01 UTC
From: Chris <chris@ilson.co.uk>
Message-ID: <1017694783.23724.0@eurus.uk.clara.net>
Source record: 45271

"Troglodite" <troglodite@aol.com> wrote in message
news:20020401153850.01011.00001875@mb-cu.aol.com...
> >
> >There are several companies able to supply Inverters that will do the
job,
> >but I have seen somewhere on the WWW where the motherboard was supplied
from
> >the cigar lighter socket. Can anybody point me to a solution
>
> There isn't a simple solution. Most desktops require 5v at several amps as
well
> as +12v and -12v. Unless you want to cannibalize your PC an inverter is
> actually a cheap/workable solution.
>
Okay.... Thanks for the comment....it was the "5v at several amps" bit that
concerned me the most, but there are some very resourceful people around,
who may have come up with an idea that had not occurred to me.

Chris.

2481. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 21:00:08 UTC
From: Joe <joe.amp@NOSPAMverizon.net>
Message-ID: <sT3q8.3907$AE1.3891@nwrddc03.gnilink.net>
Source record: 45272
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

> wondering about personal experiences converting to 6146B tubes

I had the pleasure of dealing with one of them attempts with an old cheap
guy next door who tried to do it to save $16 on tubes on the 70's.
Converting is a nightmare, if you dont know how to do it stay away.
First you have the a serious re-socketing/mounting issue/rewiring.
Then after that you find the ALC, neutralization, bias must be reworked.
In the end you will likely with end up with an RFI spewing oscillator ...its
not worth it
$150 is cheap for a 101EE pay the $135 or find some good pulls

>I recently purchased this FT-101 for $150, so it doesn't make
> much sense to spend more than I paid on a new set of tubes.
Hey.....Thats cheap for a 101EE id pay the $2

-Joe

"AB Brown" <abbrown@nospammail.com> wrote in message
news:a8a7qi$l5c$1@nntp9.atl.mindspring.net...
> As most who read my posts are already aware, I have blown 6JS6C tubes in
my
> FT-101ee. For replacement, I was going to try to obtain a matched
> replacement set until I found out the price. A well known firm just
quoted
> GE and NEC prices for a matched pair of 6JS6C at $135 and $160,
> respectively. I recently purchased this FT-101 for $150, so it doesn't
make
> much sense to spend more than I paid on a new set of tubes. So, I'm
> wondering about personal experiences converting to 6146B tubes, based on a
> fairly recent past QST article. Any successes, failures, or any other
tips
> would be much appreciated.
>
> Thanks,
> AB
>
>

2482. Re: Q of two coils in series

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 21:05:22 UTC
From: k7itm@aol.com
Message-ID: <3200347.0204011305.73dae1e9@posting.google.com>
Source record: 45273

Hi Jan-Martin,

Simply reducing Mike's calculations to a formula, you get

Qt = (L1+L2)/(L1/Q1+L2/Q2)

and in fact, it's just what you describe as well. You'll be helped
some if the coils share fields in a way that increases the inductance.

Cheers,
Tom

la8ak.xnd@online.no (J M Noeding) wrote in message
news:<3ca65859.30988286@news.online.no>...
> Hi
>
> What is the formula for calculating Q of two coils in series? In this
> case I wish to connect a 1.8mH coil (Q=650) in series with a 150ï¿½H
> coil (Q=50)
> I am quite aware of calculating series resistance and adding for the
> two coils, ending up with Q=435 on 150kHz, but hoped it was an easier
> way for the next calculation
>
> 73
> Jan-Martin
> LA8AK

2483. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 21:43:23 UTC
From: Graeme Zimmer <gzimmer@bigpond.com>
Message-ID: <iVeq8.27750$uR5.62086@newsfeeds.bigpond.com>
Source record: 45288

> >I abandoned my initial designs and am now
> >using a very simple design
> >that uses 4 diodes. The ARRL Handbook
> >calls this arrangement "diode
> >double-balanced mixer".
>
> With such a mixer it isn't possible to build an AM transmitter.

It is. In fact it is commonly done this way.
It is only necessary to unbalance the Mixer by a controlled amount.

.... Zim VK3GJZ

2484. R.F. amp module from T-195. Anyone made it works as a standalone amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 23:01:31 UTC
From: tongaloa <tongaloa@alltel.net>
Message-ID: <a8aosbluu1@iac5.navix.net>
Source record: 45275
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I picked up the R.F. amp module from a T-195 some years ago and
was looking at it for possible use with a QRP transmitter.

I've only got the module schematic, am having a bit of trouble
figuring out some of the control circuitry, and wonder if anyone has
gotten one going, standalone and would share notes.

-bob

2485. Re: PSU for PC from 12v car battery??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 23:11:52 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CA8E936.6157@pop.removethistomailme.net>
Source record: 45276

I've got a brief article on the subject at the site in my .sig -- check
out the "Designing The Low-Cost Mobile PC" link.

-- jm

---

http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2486. Re: Antenna for 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 23:25:27 UTC
From: Martin Wehner <martin@cyclotomic.com>
Message-ID: <3CA8EC67.45F443D@cyclotomic.com>
Source record: 45277

Hello Doug-

Thank you for the prompt reply. And thank you for all the great advice.
I will certainly put it to good use!
I do have a few more questions regarding your response below. If you
have time, I'd greatly appreciate your input.

Doug Smith wrote:
> When you talk about 75 ohm feedline and 50 ohm antennas, you aren't talking
> about resistance. If you take an ohmmeter to your antenna, you will read
> infinity. (with some models of antenna, you'll read zero) 50/75 ohms are
> *impedances* - valid only at the desired operating frequency. (your antenna
> that's 50 ohms at 144MHz might be 3 ohms at 28MHz)

So, theoretically, the impedances would have to be adjusted on the same
band as well, as the impendance will change from 144.0MHz to 148.0MHz,
correct? I understand that the changes will be quite small.

What does the impedance of a feedline depend on and how does it come
about?
Does the material the feedline is made of have anything to do with it?
Or is it mostly because the coax ultimately is like a network of
capacitors and inductors (i.e. it'll depend on the spacing of the
conductors and the dielectric separating them)?

> If you were to use 75-ohm feedline with a 50-ohm antenna, you would use a
> 1.5:1 balun at each end. (each end, because the radio is 50 ohms too)
> Except again, I don't think it's necessary.

Going back to this concept real quick:
I am under the assumption that a balun can be as simple as a
transformer.
How would I go about determining which transformer is appropriate for my
application?
I will go with your advice and get 50 Ohm feedline, but let's say I was
forced to use 75 Ohm feedline.
In that case, to determine which transformer is appropriate, would I
look at the transformer as a series network of a resistor and an
inductor (the resistance of the wire and the inductance of the coil)?
The wire-resistance will probably be negligible in this case, but I
wanted to check.
Would I then also have to choose it according to my operating frequency?
That would mean that, for a different band, I would have to put in a
different balun?
Also, what would I have to watch out for in terms of voltage and current
ratings? Does current flow on the antenna side of the transformer?

Also, suppliers like DigiKey make the distinction between
power-transformers and audio-transformers. What should I be looking for?

Thank you for any and all input.
I greatly appreciate your help!

Martin

Martin Wehner (KG6KLF)

e-mail: <martin@cyclotomic.com>
web: http://www.cyclotomic.com/~martin

2487. Re: Q of two coils in series

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 23:29:51 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <a8aqhephi1@helle.btinternet.com>
Source record: 45278

Q is a property of reactance which may be either high or low, good or bad.

Like SWR, it is a quantity which is of little direct use except for calculating other characteristics of a circuit which ARE useful.

Q meters at least indicate what they are purported to measure. Whereas SWR meters don't, they delude the users.

2488. Time to think about running mobile?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-01 23:40:20 UTC
From: Jerry Oxendine <joxendi@bellsouth.net>
Message-ID: <Hf6q8.4565$0T6.691853@e3500-atl1.usenetserver.com>
Source record: 45279

If you are ready for a high performance multi-band HF mobile antenna, then I ask that you
visit www.qsl.net/k4kwh. This is a very heavy duty screwdriver-type antenna and goes beyond the cheap materials often seen in some others. Here are the basic specs.

Carolina Cyclone I

Full 2" loading coil (compare to 1 1/2" on DK3 copies)
#14 silver plated copper windings (compare to skinny little #16 wire on DK3 derivatives)
Wound at 8 turns per inch (compare to 10 TPI on DK 3)
Extra heavy duty finger stock using 1/4" wide fingers and extra springy for complete contact
(compare to the little copper or brass stuff that breaks easily)

Handles up to 800 watts SSB (Try that with a PVC screwdriver coil!)
impedance matching done with a simple little inductor at the feedpoint. No toroids to
give "finicky" performance/matching up on the higher bands.

And all without breaking the bank like those $300+ versions! Just $240 shipped to the
lower 48 states!

Hey, guys, it's SPRING (at least in the South), and it's time to get out and get that mobile
up and running!

73

Jerry
K4KWH

2489. AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 00:21:44 UTC
From: Martin Wehner <martin@cyclotomic.com>
Message-ID: <3CA8F998.36D619D5@cyclotomic.com>
Source record: 45280

Hello All-

My question this time is concerning a simple AM transmitter project I've
been working on.
Since I don't want to have to build my own receiver (yet), I decided to
use a carrier-frequency of just around 1MHz, so that I can pick up the
signal with a conventional radio.
Let me state right away that I am only doing this for testing purposes.
My goal is not to play a prank or mess with another commercial AM
station's signal, I am just trying to learn.

What I have done so far is the following:
With some help from sci.electronics.basics, I believe I finally got rid
of the notion that in AM, the carrier's amplitude is changed over time.

I abandoned my initial designs and am now using a very simple design
that uses 4 diodes. The ARRL Handbook calls this arrangement "diode
double-balanced mixer".
However, I am not using the transformers that the Handbook uses, but
attached my carrier signal and modulating signal directly to the diodes.
Question #1: why are the transformers necessary? (I am referring to the
2001 ARRL Handbook, page 15.15)

I simulated the whole thing in Spice (without transformers); the output
wave-form did not look like what I expected for it to, but running a FFT
of the output in Mathematica shows that the carrier component is indeed
suppressed, and that I have a LSB and a USB.

I built the circuit and looked at its output with the oscilloscope. The
output wave-form did not look like what Spice predicted it would look
like, but I can live with that (after all my signal sources (RF and AF)
are probably less than perfect).

Question #2: what should the signal look like? Spice shows the output as
a wave-form that follows the modulating signal in shape, but made up of
the carrier frequency. It does not look like what I've seen as an AM
wave-form before, where you have the top and bottom of the output
"mirrored."
Sorry I am doing such a bad job at describing this. If necessary, I can
post the output to my web-site.

The oscilloscope shows the output as just a band, with no discernible
shape. It does look like I can see the wave-form jump up and down a bit
when the AF changes, but when I applied a sine-wave of AF frequency to
it, I didn't see the nice crisp shape I expected to see. When I trigger
on the output signal itself, I can see the carrier frequency in there.

Question #3: Does what I see on the scope indicate that I am not modulating the carrier enough?
How would I go about changing the amount of modulation? Would I have to change the amplitude of the input signals? (Only possible to a certain extent, unless I build separate amplifiers).

Note: I built the circuit on solderless breadboard by simply inserting components (without cutting their leads) and connecting nodes with wires where necessary. I am using simple 1N914 diodes. The carrier and AF source's amplitudes are the same as the ones I used for the Spice simulation.

I used a standard radio and was able to pick up the signal I was producing.
The interesting thing about this is that I was able to pick up the signal without any antenna attached to my circuit.
The signal I picked up was very weak and changed strength, as I moved the receiving radio around my circuit.

I then built a simple amplifier circuit, using a standard NPN BJT as amplifier (a simple Class A amplifier, if I am not mistaken).
I am having a hard time looking at the signal on my scope, but it does look like the amplitude is greater now.
In any event: signal reception was not improved even with the amplifier in place (I built it for 10x amplification).

Question #4: What kind of an antenna could I hook up to my circuit? At a frequency of 1MHz, the signal's wave-length doesn't seem practical for the methods outlined in the Handbook.
I tried connecting just a piece of wire to it and connecting another wire of equal length to my power-supply's ground in a feeble attempt at making a dipole, but to no avail. If something like this should work, what kind of wire should I be using?

Question #5: I am a bit confused as to what the power-ratings for radios mean.
If I say I am transmitting at 5W power, what does that really mean? Does the standard: P=V*V/R still hold? In the standard case of dealing with a 50 Ohm antenna, does that mean my final amplifier is outputting a voltage of +/- 15.81V across the antenna terminals?
Does that mean that you may have hundreds of volts across the terminals for higher-power transmitters? How do you obtain these voltages? Would you use a transformer and then connect the antenna terminals directly to the transformer? Or does your actual power-supply have to supply these voltages?

Thank you for reading all this. Even though my questions are very basic, I hope somebody out there can give me a hand in figuring out these things. Any help will be greatly appreciated!

Thanks in advance! 73's

Martin

Martin Wehner (KG6KLF)

e-mail: <martin@cyclotomic.com>
web: http://www.cyclotomic.com/~martin

2490. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 00:47:46 UTC
From: Gary Glaenzer <nobulltrans@mchsi.com>
Message-ID: <Sc7q8.149331$Yv2.45426@rwcrnsc54>
Source record: 45281

this an April Fools thing, isn't it?

"Martin Wehner" <martin@cyclotomic.com> wrote in message
news:3CA8F998.36D619D5@cyclotomic.com...
> Hello All-
>
> My question this time is concerning a simple AM transmitter project I've
> been working on.
> Since I don't want to have to build my own receiver (yet), I decided to
> use a carrier-frequency of just around 1MHz, so that I can pick up the
> signal with a conventional radio.
> Let me state right away that I am only doing this for testing purposes.
> My goal is not to play a prank or mess with another commercial AM
> station's signal, I am just trying to learn.
>
> What I have done so far is the following:
> With some help from sci.electronics.basics, I believe I finally got rid
> of the notion that in AM, the carrier's amplitude is changed over time.
>
> I abandoned my initial designs and am now using a very simple design
> that uses 4 diodes. The ARRL Handbook calls this arrangement "diode
> double-balanced mixer".
> However, I am not using the transformers that the Handbook uses, but
> attached my carrier signal and modulating signal directly to the diodes.
> Question #1: why are the transformers necessary? (I am referring to the
> 2001 ARRL Handbook, page 15.15)
>
> I simulated the whole thing in Spice (without transformers); the output
> wave-form did not look like what I expected for it to, but running a FFT
> of the output in Mathematica shows that the carrier component is indeed
> suppressed, and that I have a LSB and a USB.
>
> I built the circuit and looked at its output with the oscilloscope. The
> output wave-form did not look like what Spice predicted it would look
> like, but I can live with that (after all my signal sources (RF and AF)
> are probably less than perfect).
>
> Question #2: what should the signal look like? Spice shows the output as
> a wave-form that follows the modulating signal in shape, but made up of
> the carrier frequency. It does not look like what I've seen as an AM
> wave-form before, where you have the top and bottom of the output
> "mirrored."
> Sorry I am doing such a bad job at describing this. If necessary, I can
> post the output to my web-site.

>
> The oscilloscope shows the output as just a band, with no discernible
> shape. It does look like I can see the wave-form jump up and down a bit
> when the AF changes, but when I applied a sine-wave of AF frequency to
> it, I didn't see the nice crisp shape I expected to see. When I trigger
> on the output signal itself, I can see the carrier frequency in there.
>
> Question #3: Does what I see on the scope indicate that I am not
> modulating the carrier enough?
> How would I go about changing the amount of modulation? Would I have to
> change the amplitude of the input signals? (Only possible to a certain
> extent, unless I build separate amplifiers).
>
> Note: I built the circuit on solderless breadboard by simply inserting
> components (without cutting their leads) and connecting nodes with wires
> where necessary. I am using simple 1N914 diodes. The carrier and AF
> source's amplitudes are the same as the ones I used for the Spice
> simulation.
>
> I used a standard radio and was able to pick up the signal I was
> producing.
> The interesting thing about this is that I was able to pick up the
> signal without any antenna attached to my circuit.
> The signal I picked up was very weak and changed strength, as I moved
> the receiving radio around my circuit.
>
> I then built a simple amplifier circuit, using a standard NPN BJT as
> amplifier (a simple Class A amplifier, if I am not mistaken).
> I am having a hard time looking at the signal on my scope, but it does
> look like the amplitude is greater now.
> In any event: signal reception was not improved even with the amplifier
> in place (I built it for 10x amplification).
>
> Question #4: What kind of an antenna could I hook up to my circuit? At a
> frequency of 1MHz, the signal's wave-length doesn't seem practical for
> the methods outlined in the Handbook.
> I tried connecting just a piece of wire to it and connecting another
> wire of equal length to my power-supply's ground in a feeble attempt at
> making a dipole, but to no avail. If something like this should work,
> what kind of wire should I be using?
>
> Question #5: I am a bit confused as to what the power-ratings for radios
> mean.
> If I say I am transmitting at 5W power, what does that really mean? Does
> the standard: P=V*V/R still hold? In the standard case of dealing with a
> 50 Ohm antenna, does that mean my final amplifier is outputting a
> voltage of +/- 15.81V across the antenna terminals?
> Does that mean that you may have hundreds of volts across the terminals
> for higher-power transmitters? How do you obtain these voltages? Would
> you use a transformer and then connect the antenna terminals directly to

> the transformer? Or does your actual power-supply have to supply these
> voltages?
>
> Thank you for reading all this. Even though my questions are very basic,
> I hope somebody out there can give me a hand in figuring out these
> things. Any help will be greatly appreciated!
>
> Thanks in advance! 73's
>
> Martin
>
> --
> Martin Wehner (KG6KLF)
>
> e-mail: <martin@cyclotomic.com>
> web: http://www.cyclotomic.com/~martin
> --

2491. Re: Antenna for 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 01:16:14 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uai1knqshem0ba@corp.supernews.com>
Source record: 45282

"Martin Wehner" <martin@cyclotomic.com> wrote in message
news:3CA8EC67.45F443D@cyclotomic.com...
> So, theoretically, the impedances would have to be adjusted on the same
> band as well, as the impendance will change from 144.0MHz to 148.0MHz,
> correct? I understand that the changes will be quite small.

The impedance change may or may not be quite small over the band, depending on the antenna. However, the 2 meter band is fairly narrow, compared to it's frequency, so it's not a big problem. Back when repeaters were always aboove 146, we always used an antenna for 147 for FM and one for 145 for SSB/CW. Since they were polarized differently it made sense to have 2 antennas anyway, but they were different sizes because of the different frequency.

> What does the impedance of a feedline depend on and how does it come
> about?

The impedance of the feedline depends on the geometry of the line and the materials.

> Does the material the feedline is made of have anything to do with it?
> Or is it mostly because the coax ultimately is like a network of
> capacitors and inductors (i.e. it'll depend on the spacing of the
> conductors and the dielectric separating them)?

You got it. But there are some differences in dielectric coefficient between different insulators.

> Going back to this concept real quick:
> I am under the assumption that a balun can be as simple as a
> transformer.
> How would I go about determining which transformer is appropriate for my
> application?

Actually a balun is often simpler.

> I will go with your advice and get 50 Ohm feedline, but let's say I was
> forced to use 75 Ohm feedline.
> In that case, to determine which transformer is appropriate, would I
> look at the transformer as a series network of a resistor and an
> inductor (the resistance of the wire and the inductance of the coil)?
> The wire-resistance will probably be negligible in this case, but I
> wanted to check.
> Would I then also have to choose it according to my operating frequency?
> That would mean that, for a different band, I would have to put in a
> different balun?

There are balun designs that work at a single frequency, and others that are very broadband. It depends on the particular design you choose.

However, in the case of 75 ohm vs. 50 ohm, I would be careful of my choices, or perhaps just ignore the difference. There will be some loss going into the 75 ohm feedline, but there are likely to be larger losses by inserting a transformer. Balun is probably inappropriate since both the input and output are unbalanced.

Probably more significant is the line loss. RG-58 has a loss of about 6 db per hundred feet at 2 meters. Good quality RG-59 should be similar, but good quality RG-59 is pretty hard to come by. The sort of RG-59 you find for TV installations is probably twice as lossy or worse.

Obviously, whether this matters depends on how long your run is. A quarter wave isn't all that great an antenna, but the little antenna that came on your HT is probably 6-12 dB poorer, so if you have a 50 foot run, you're still better off, plus getting the antenna higher is what matters at VHF. It's almost all that matters. Sure a little gain is nice, but no matter how much gain you get, getting the antlers up another 20 feet will make a bigger difference.

If you have a longer run than 50 feet or so, I would go to a larger cable. RG-8X has about 4 dB per 100' and 9913 about 1.6. There are several other flavors inbetween, with cost pretty much related to loss. 3 dB is barely perceptible, so if you have a 50 foot run, getting something better than RG-8X probably will be wasting money. If you have a 200 foot run, though, you better get some nice coax.

> Also, what would I have to watch out for in terms of voltage and current
> ratings? Does current flow on the antenna side of the transformer?
> Also, suppliers like DigiKey make the distinction between
> power-transformers and audio-transformers. What should I be looking for?

RF transformers aren't like audio transformers. You do need to worry about voltages, and the voltages can be astonishingly high. You can use Ohm's law to calculate the voltage into 50 ohms based on your power - *BUT* that assumes a perfect antenna. Anything less than perfect multiplies the voltage, potentially by a lot. If you intend to use one antenna on multiple bands, common on HF, not so common on VHF, voltages 10X what you would calculate based on your power are not unusual. If you are making a resonant antenna for a single band and are reasonably careful in your measurements, 2X ought to be a reasonable margin.

You can't go to DigiKey and buy the things, tho. For some cases you can buy something off the shelf, but it's more common to build something, often using several different types of coax to make the transition. At HF, hams sometimes use 450 or 600 ohm feedline. In those cases where the impedance transformation is very large, they may very well wind a transformer that looks sort of like an audio transformer, but with a different core material. For smaller transformations, though, 2 different types of coax are generally used. There are probably dozens of designs in the handbook.

..

2492. Re: Home Brew Antenna Analyser

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 04:14:04 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <a8bbfv$5up$1@slb4.atl.mindspring.net>
Source record: 45283

----- Original Message -----
"Harold E. Johnson" <W4ZCB@mchsi.com> Wrote:
Newsgroups: rec.radio.amateur.homebrew
Sent: Monday, April 01, 2002 8:56 AM
Subject: Re: Home Brew Antenna Analyser

> No, but a tape measure, wire and insulators were in vogue
> back then, as was common sense. I'm not sure as to why
> vector network analyzers, Boonton RX bridges and time
> domain reflectometers missed being named as additional
> tools needed to understand and use a radiator.

Actually, my own antennas have usually been tape measure and insulators... I am fond of 40 meter dipoles since they load on 15 well enough.

Of course, I also tend to use a radio with a tolerant pi output matching system and they'll load up into darn near anything.

Heck, my last antenna was a wire down the hall and hooked to the refridgerator door. I tuned it by opening the door until I got a decent match.

Fancy test gear has it's uses, but for most ham applications it may be overkill. Nice to use if somebody has one, but not really necessary in my opinion.

Most dipoles or yagi's when built to the right dimensions work nicely.

Now, if you want to fool with fractal antennas, an antenna analyzer will be a big help....

Jim Pennell
N6BIU

2493. Re: Antenna for 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 05:44:29 UTC
From: w9wi@linux1.localdomain
Message-ID: <slrnaaihtv.18e.w9wi@linux1.localdomain>
Source record: 45284

On Mon, 01 Apr 2002 15:25:27 -0800, Martin Wehner <martin@cyclotomic.com> wrote:
>So, theoretically, the impedances would have to be adjusted on the same
>band as well, as the impendance will change from 144.0MHz to 148.0MHz,
>correct? I understand that the changes will be quite small.

Yes, and yes. The impedance will vary across the 2m band, but the variation
will small enough that you can ignore it.

>What does the impedance of a feedline depend on and how does it come
>about?
>Does the material the feedline is made of have anything to do with it?
>Or is it mostly because the coax ultimately is like a network of
>capacitors and inductors (i.e. it'll depend on the spacing of the
>conductors and the dielectric separating them)?

Mostly, the ratio of the diameters of the inner and outer conductors.

>Going back to this concept real quick:
>I am under the assumption that a balun can be as simple as a
>transformer.
>How would I go about determining which transformer is appropriate for my
>application?

Yes. Actually, "balun" is often a misnomer. (including in your case) It's
actually a "broadband transformer". "balun" is really only correct when one
side is balanced and the other isn't. But everybody knows what you mean<g>.

There are two other ways to handle impedance transformation in your case.
One would be to use a length of transmission line of impedance *between* 50
and 75 ohms. (I don't recall the formula) The other would be a literal
tuned transformer, with primary and secondary inductances. That scheme
would be tuned to a specific frequency and depending on "Q" might not work
across the whole 2m band.

The typical windings on a ferrite core is simply more practical, smaller &
easier to find the parts. Except that I don't recall whether most of them
are actually effective at 144MHz?

>I will go with your advice and get 50 Ohm feedline, but let's say I was
>forced to use 75 Ohm feedline.
>In that case, to determine which transformer is appropriate, would I
>look at the transformer as a series network of a resistor and an
>inductor (the resistance of the wire and the inductance of the coil)?
>The wire-resistance will probably be negligible in this case, but I
>wanted to check.

Ignore both the wire resistance and the coil inductance. The radio will see the impedance of the antenna, modified by the appropriate transformation ratio. In your case, you would need a 1.5:1 impedance ratio (at each end).

>Would I then also have to choose it according to my operating frequency?
>That would mean that, for a different band, I would have to put in a
>different balun?

Depends on the design used. The broadband ferrite ones would probably cover several bands. Tuned transformers or transmission-line transformers are indeed frequency-specific.

>Also, what would I have to watch out for in terms of voltage and current
>ratings? Does current flow on the antenna side of the transformer?
>Also, suppliers like DigiKey make the distinction between
>power-transformers and audio-transformers. What should I be looking for?

Digi-Key doesn't make anything appropriate. Power and audio transformers are both low-frequency units - designed to operate no higher than 20KHz or so. It won't pass much if anything at 144MHz.

With that radio I don't think you're going to have to worry about voltage and current ratings. The powers involved will be small enough to be no problem.

Yes, current flows on both sides.
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

2494. Re: Antenna for 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 06:02:19 UTC
From: KC8PMX <kc8pmx@NOSPAMdiamondcs.net>
Message-ID: <a8c8ab41qnr@enews2.newsguy.com>
Source record: 45294

"Martin Wehner" <martin@cyclotomic.com> wrote in message
news:3CA88C27.AC8A73D5@cyclotomic.com...
> Hello All-
>
> I am interested in building an antenna for a 2m handheld and have a few
> questions. Any input would be greatly appreciated.
>
> The handheld I currently have is a Icom IC-T7H, 5W max output power. I
> am currently using the supplied Icom FA-1443B dual-band antenna
> (VHF/UHF).
> I am interested in FM on 2m only and don't care if the antenna I build
> cannot do UHF.
>
> Here are my questions:
>
> (1) Do you even think it's worth doing it? Can a low-power radio such as
> mine even power a home-built antenna? Has anybody here used this
> transceiver with a home-built antenna before?

Sure.... the equipped rubber ducky antenna is about the equivalent of a
dummy load. Any improvement over this is definitely a good thing. I have
the same one and with an external power supply it will deliver up to 6
watts.

>
> (2) I am very worried about damaging the radio. Are there any checks I
> can perform before hooking up my home-built antenna to the transceiver?

Connect an SWR meter to verify if the external antenna if within basic
tolerances. Most new transcievers have some sort or form of protection
against this but checking the antenna out cannot hurt.

>
> (3) Currently I am planning on building an antenna I found in the ARRL
> Handbook: the "1/4 lambda antennas for home, car and portable use"
> project (basically a vertical with ground-radials mounted at its base).
> Has anybody ever built that one? How well did it work?

The simple "quick and dirty" antenna using a SO-239 antenna is a great and
cheap antenna. I just build one and it works great. With the max output of
this particular HT I have gotten over 30 miles with this antenna. Mounted
the SO-239 connector in the end of a 10 foot PVC pipe and mounted the other
end to a camera tripod and I have a wonderful portable antenna. (the
tripod's head was broken off before I got it.)

>
> (4) Do I need a balun for the antenna if fed with coax? If I do, how
> would I go about building/buying one? Is a balun just a transformer that
> matches the imepedance of the feed-line to the antenna impedance (e.g.
> if you use 75 Ohm feed-line, but use a 50 Ohm antenna, would you use a
> transformer with coil-resistances of 75 Ohm and 50 Ohm, and a turn-ratio
> of 1:1)?
>

I didn't use one, and had no problems. Absolute highest SWR at any point
was barely reaching a 2 to 1. Make sure to use the 50-52Ohm coax though.

>
> (7) What is the best place to buy the hardware from that I'll need for
> construction? The project in the Handbook calls for brass or steel rods.
> Does the Home Depot carry that kind of hardware? If not, I also know of
> an Ace Hardware store around here: would they carry it?
>

Use copper welding rods. My local Gilroy's store sells them for 29 cents a
piece.

> (8) I am planning on sticking the antenna out in my back-yard somewhere.
> Does anything speak against using a simple PVC pipe to raise the antenna
> off the ground?

Only building codes maybe. Make this into what is called a Vent-tenna. Use
a coupler to attach it to the "stink-pipe" coming thru your roof.

Good Luck.....

Ryan KC8PMX

2495. rebuilding RF Concepts 2/70G

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 06:03:57 UTC
From: Tomm Aldridge <taldridge@attbi.com>
Message-ID: <hRbq8.150616$Yv2.46822@rwcrnsc54>
Source record: 45285

Does anyone here have the schematic for the RFC 2/70G dual band amp. I have an old one that needs a new RX preamp but I have no schematic or service info.

Thanks

KD7QAE

2496. Re: PSU for PC from 12v car battery??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 06:13:08 UTC
From: KC8PMX <kc8pmx@NOSPAMdiamondcs.net>
Message-ID: <a8c8ac51qnr@enews2.newsguy.com>
Source record: 45295

I use a 400w DC to AC inverter and it seems to work fine for me. (usually around 99bucks) I have utilized both the laptop and the desktop pc and monitor on this. Never even got over a little warm. I did however use a direct connection to the battery. I have a cord with two clamps similar to a jumper cable on one end and the female cigarrette lighter socket on the other end. Have used this in field day and other similar type of activities.

Ryan KC8PMX

"Troglodite" <troglodite@aol.com> wrote in message news:20020401153850.01011.00001875@mb-cu.aol.com...
> >
> >There are several companies able to supply Inverters that will do the job,
> >but I have seen somewhere on the WWW where the motherboard was supplied from
> >the cigar lighter socket. Can anybody point me to a solution
>
> There isn't a simple solution. Most desktops require 5v at several amps as well
> as +12v and -12v. Unless you want to cannibalize your PC an inverter is
> actually a cheap/workable solution.
>

2497. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 06:50:45 UTC
From: Testweight <testweight@blueyonder.co.uk>
Message-ID: <9xcq8.36888$2O2.1633660@news-binary.blueyonder.co.uk>
Source record: 45286
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Brand new boxed pair for sale on uk yahoo auction site. Try
http://page.auctions.shopping.yahoo.com/uk/auction/62021340?aucview=0x10
Only want £45 for pair.

"AB Brown" <abbrown@nospammail.com> wrote in message
news:a8a7qi$l5c$1@nntp9.atl.mindspring.net...
> As most who read my posts are already aware, I have blown 6JS6C tubes in
my
> FT-101ee. For replacement, I was going to try to obtain a matched
> replacement set until I found out the price. A well known firm just
quoted
> GE and NEC prices for a matched pair of 6JS6C at $135 and $160,
> respectively. I recently purchased this FT-101 for $150, so it doesn't
make
> much sense to spend more than I paid on a new set of tubes. So, I'm
> wondering about personal experiences converting to 6146B tubes, based on a
> fairly recent past QST article. Any successes, failures, or any other
tips
> would be much appreciated.
>
> Thanks,
> AB
>
>

2498. Re: Q of two coils in series

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 07:34:00 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <n8liau0vhg3bqh94q4n6me080e2md4v8v3@4ax.com>
Source record: 45121

>la8ak.xnd@online.no (J M Noeding) wrote in message
news:<3ca65859.30988286@news.online.no>...
>
> > What is the formula for calculating Q of two coils in series? In
> > this case I wish to connect a 1.8mH coil (Q=650) in series with a
> > 150uH coil (Q=50)

Are you sure that you measured the Q for each individual inductor at the intended final operating frequency ?

The inductive reactance is obviously frequency dependent, but so are the resistive losses. Skin dept is inversely proportional to the square root of frequency, thus reducing the effective cross section of the conductor and hence increasing the resistive losses with frequency. For core materials other than air or vacuum, the core losses have some frequency dependency. Thus, it is very important to measure the actual effective series resistance of a coil at the intended frequency and not rely on figures obtained from tables or manufacturer data sheets that may apply for quite different frequencies.

However, the Q=650 for a 1.8 mH coil at LF sounds quite optimistic. Is this an actual measurement at 150 kHz ? Where is the parasitic resonance of that coil ? It appears as if the measurements are taken close to the self resonance frequency, in which case the distributed capacitance between the turns form a parallel resonance circuit and close to resonance, the combined reactance can be much higher than the inductive or capacitive reactance alone and thus, the apparent Q might be quite high.

To calculate the Q of the two coils in series, in addition to calculating the combined inductive reactance and resistance, you also have to calculate the resulting combined distributed capacitance and from that the capacitive reactance, combine the parallel connected inductive and capacitive reactance and calculate the Q by applying the series resistance (losses).

Paul OH3LWR

2499. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 08:52:08 UTC
From: Peter Rachow <peter.rachow@t-online.de>
Message-ID: <a8brvfbnr07$2@news.t-online.com>
Source record: 45287

Martin,

>I abandoned my initial designs and am now
>using a very simple design
>that uses 4 diodes. The ARRL Handbook
>calls this arrangement "diode
>double-balanced mixer".

With such a mixer it isn't possible to build an AM transmitter. This is due to the fact that an AM signal requires a carrier that in this case unfortunately ;-)) is suppressed by the balanced mixer. You need to apply quite a different modulator design. If you need one, send me an e-mail.

>Question #3: Does what I see on the scope
>indicate that I am not modulating the carrier enough?

Not easy to decide without a picture. Could you take a photo of your scope's screen and put it to a website or e-mail it? It would make it easier to discern the potential problems you are facing.

>Question #2: what should the signal look like?

Look here

http://www.peter-rachow.de/amsignal.jpg

This is a photo of an AM carrier modulated to a degree of 100% by a single sine wave audio frequency.

>Question #4: What kind of an antenna could I
>hook up to my circuit? At a
>frequency of 1MHz, the signal's
>wave-length doesn't seem practical for
>the methods outlined in the Handbook.

Depends on the distance you want to hear your signal. Within your house a ferrite antenna could be sufficient. If you want more, a wire antenna is recommended, but you must have a lot of space for it. Medium waves are not to be covered with handy antennas ;-))

>Question #5: I am a bit confused as to what the
>power-ratings for radios mean.
>If I say I am transmitting at 5W power, what
>does that really mean? Does the standard:
>P=V*V/R still hold? In the standard case of

>dealing with a 50 Ohm antenna, does that
>mean my final amplifier is outputting a
>voltage of +/- 15.81V across the antenna terminals?

Depends. The power of a transmitter usually is measured in the peak envelope power mode. That means with your oscilloscope's reading you can measure the voltage of the sine wave of your (unmodulated) transmitter. This is called the "peak-to-peak"-voltage (I hope this expression in English is accurate, I'm not a native speaker ;-)). You divide this value by twice the sine factor (1.41 * 2 = 2,82) an get the dc equivalent. Square it an divide it by the 50 Ohm antenna load impedance. That result is your power in watts.

So long.

hth es 73

Peter
DK7IH
--
http://www.peter-rachow.de

2500. Re: Home Brew Antenna Analyser

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 09:42:22 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3ca96694.2056201@news.freeserve.net>
Source record: 45289

On Mon, 1 Apr 2002 20:14:04 -0800, "Jim Pennell" <NoSpam@killspam.com>
wrote:

>
>----- Original Message -----
>"Harold E. Johnson" <W4ZCB@mchsi.com> Wrote:
>Newsgroups: rec.radio.amateur.homebrew
>Sent: Monday, April 01, 2002 8:56 AM
>Subject: Re: Home Brew Antenna Analyser
>
>
>>
>> No, but a tape measure, wire and insulators were in vogue
>> back then, as was common sense. I'm not sure as to why
>> vector network analyzers, Boonton RX bridges and time
>> domain reflectometers missed being named as additional
>> tools needed to understand and use a radiator.
>>
>
> Actually, my own antennas have usually been tape measure and
>insulators... I am fond of 40 meter dipoles since they load on 15 well
>enough.
>
> Of course, I also tend to use a radio with a tolerant pi output matching
>system and they'll load up into darn near anything.
>
> Heck, my last antenna was a wire down the hall and hooked to the
>refridgerator door. I tuned it by opening the door until I got a decent
>match.
>
And after getting a decent match, you lit a congratulatory cigar with
it ;-)

2501. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 09:56:52 UTC
From: Peter Rachow <peter.rachow@t-online.de>
Message-ID: <a8bvpj$5c5$06$1@news.t-online.com>
Source record: 45290

Graeme,

Graeme Zimmer schrieb in Nachricht ...

[DBM]

>It is. In fact it is commonly done this way.
>It is only necessary to unbalance the Mixer
>by a controlled amount.

But, in fact, this isn't a DBM anymore. And, with deliberately abandoning the benefits of a DBM, other modulator designs give the constrcutor more advantages.

BTW, a (disbalanced) DBM must be switched in one of the pre-amplifier stages of the transmitter. But, due to efficiency (and simplicity) reasons it is a better idea to modulate the last stage of an AM transmitter. This means, keeping to these design guidelines, you can run all the pre-stages in class C mode and by this enhancing the efficiency of the whole system and e. g. keeping thermal losses small.

If you operate all the tx stages in class A mode (which will be neccessary if you modulate one of the low power stages of the AM transmitter to maintain linear amplification throughout all the stages) you will have a very poor input/output energy ratio (which is common for SSB transmitters).

I recommend a modulator applying an af transformer switched in the Vcc line of the AM transmitter's final stage. This circuit requires an af amplifier capable of delivering nearly the same power level as the rf amplifier stage. Benefit: The additional amount of input energy then increases the total output of the rf stage. Another solution could be a transistor driven by the audio frequency and like the transformer switched into the power line of the final rf stage.

73!

Peter
--
http://www.peter-rachow.de

2502. Is the National MB-150 Tank Circuit ..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 11:20:32 UTC
From: "David J. Windisch" <davidw@copper.net>
Message-ID: <cugq8.242$ex5.149326@newsfeed.slurp.net>
Source record: 45291

.. for push-pull 807's or 6146's, and does it have a link on each coil?

Got a really clean one, with one link, and am wondering about making a
medium-power balanced tuner out of it.

TIA.

73, Dave, K3BHJ

2503. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 11:23:25 UTC
From: Wayne <wayneleake@wayneleake.net>
Message-ID: <uaj55diiet41c@corp.supernews.com>
Source record: 45292
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Part of the reason that tube prices went up is due to fewer being made and
sold.
I saw this while working in my brothers TV repair shop.
6146's are much lower priced compared to those 6js6c's, at least on the web
site I had located by doing a search..
And, IMO, are a bit more durable.
Though I never used them to replace the 6js6c's...
Need to change the socket for that.

--
Wayne. <|:^)>
KG6KFE@charter.nospam.net
http://www.wayneleake.net

"Joe Mama" <joemama@prozac.net> wrote in message
news:c3chau8oviu859hdmh0912cfnbakk2u45j@4ax.com...
> On Mon, 1 Apr 2002 13:11:16 -0500, "AB Brown" <abbrown@nospammail.com>
> wrote:
>
> > As most who read my posts are already aware, I have blown 6JS6C tubes in
my
> > FT-101ee. For replacement, I was going to try to obtain a matched
> > replacement set until I found out the price. A well known firm just
quoted
> > GE and NEC prices for a matched pair of 6JS6C at $135 and $160,
> > respectively. I recently purchased this FT-101 for $150, so it doesn't
make
> > much sense to spend more than I paid on a new set of tubes. So, I'm
> > wondering about personal experiences converting to 6146B tubes, based on
a
> > fairly recent past QST article. Any successes, failures, or any other
tips
> > would be much appreciated.
>
> I don't have a suggestion, but I have a comment. I remember when you
could
> get horizontal sweep tubes like 6LQ6, 6KD6, etc for about five bucks
apiece,
> and it wasn't all that long ago. Though the quality may not be equivalent
> to domestic tubes, there are new [mostly audio] tubes coming out of China
> and Russia for reasonable prices, and it really irritates the living heck
> out of me to see these money-lusting opportunists driving the prices up on
> American NOS just because there are idiots who will pay it while the rest

of
> us have to suffer without..
>
> I don't know that you're gonna find 6146's any cheaper, cuz just about
> twenty years ago you could rob them out an old commercial mobile rig or
get
> them from almost any local ham who had them laying around in the ham
shack,
> but from what I understand these are now difficult to find as well. Guys
> used to give their old equipment away to people who needed it, but all of
> sudden anything which is labeled as "vintage" or "obsolete" is made out of
> gold, and people literally *hoard* it for the "collectibility" and make it
> unaffordable to those of us who need it for practical or recreational
use..
>
> Fortunately, I have a selection of NOS audio and RF tubes to use as
> replacements for my own equipment, cuz even though I can afford new tubes
> i'd probably let my equipment sit on the shelf and gather dust before
> catering to the "collectors" and greedy consumer slavemasters..
>
>
> > Thanks,
> > AB
>
> -jm
>
> 1968 XLCH under construction
> 1984 XR-1000
> 1987 Jaguar XJ6 Vanden Plas
>
> To return mail no spam, change the reply address to:
>
> "joemama at rarebird dot net"

2504. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 11:48:46 UTC
From: AB Brown <abbrown@nospammail.com>
Message-ID: <a8c5pi$1hf$1@slb6.atl.mindspring.net>
Source record: 45293
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Yes, I know. I wish there was something that could be done but I guess it is the rarity of the tube that drives the price way up. I notice that almost all sweep tubes these days are high priced. Also, I guess they're not really meant for RF amplifier service and better suited for 70's televisions, which would also be a contributing factor. One often wonders why reputible manufacturers would have used them anyway as RF amp tubes. Cheaper at the time I suppose.

Just a few years ago, I probably had a dozen 6JS6's. Not thinking I would ever be going back to tube equipment, I practically gave away close to 500 tubes. Now, obviously, I'm seriously regretting my mistake!

I've always liked to troubleshoot and repair my own equipment. With tube equipment, I am quite the novice but I know this will improve over time. Earlier solid state rigs were challenging to repair, but I almost always managed to get them up and running again, at least 80 percent of the time. Today's modern rigs are beyond my capabilities to repair, especially with all the surface mount components involved. Therefore, I tend to avoid them but the door is then opened to earlier rigs. However, obtaining parts gets more and more difficult as the equipment ages. This Yaesu tube situation is a good example. It's unfortunate for those like me who like to keep older equipment functional.

BTW, I'd like to thank those people who provided several alternatives to obtaining the 6JS6C's at more reasonable prices. I intend to look into these further.

If I decide to convert to the 6146's, I'll post the results since there seems to be little feedback info. regarding this subject.

Thanks again and please continue to share opinions and experiences with the 6146 conversion.

AB

2505. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 13:19:29 UTC
From: maxpowa <maxpowa@iwontellsorry.com>
Message-ID: <Bdiq8.44473$DE4.6016@afrodite.telenet-ops.be>
Source record: 45296

"Gollywog" <_eng@ilos.net> schreef in bericht
news:ud5p8.232019$kb.13109030@news1.calgary.shaw.ca...
>
> Anybody:
>
> What's up with Dan's Small Parts? I'm sitting on an order, waiting for the
> monthly change of catalog he mentions at http://www.fix.net/dans.html and
> there has been nothing since Feb 11/02. Worse yet I've tried 5 times
> (various days & times) and I can't get an answer on the phone. At this
point
> I'm glad I'm still holding the money order! I've done a google and there
> don't seem to be any complaints to date - what's up?
>
> Mike
> va4mgw

I ordered from dan's 3 weeks ago myself, first time I ordered from him, have
been anoyed the last week, running to the mailbox every day, because I'm
waiting for some stuff, and 3 weeks is to long, how the hell can it take
someone 3 weeks to put some bags in a box, label it and put it in the mail.
Im' very glad also I've kept my part of the money order card, the ostal
office promissed me they would get my money back incase of any problems.
Didn't try to call, because a call to the states from here (belgium) is
quite expensive.

Steven

2506. Re: Home Brew Antenna Analyser

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 15:04:16 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <a8ci23efr1@nntp9.atl.mindspring.net>
Source record: 45098

----- Original Message -----
"Mike W" <mike@corn2.freeserve.co.uk> Wrote:
>>
>> Heck, my last antenna was a wire down the hall
>> and hooked to the refridgerator door. I tuned it
>> by opening the door until I got a decent
>> match.
>>
>
>
> And after getting a decent match, you lit a congratulatory
> cigar with it ;-)

Nah, but I was worried as to whether I might be cooking the food in tne
'fridge...

Jim Pennell
N6BIU

2507. Re: QRP transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 15:10:16 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <a8chlb$ra6ql$1@ID-61331.news.dfncis.de>
Source record: 45097

If you're interested in a tube transmitter have a look at:

http://www.hanssummers.com/radio/cwtx/index.htm

It's for 80m but will work for 40m as well...

Hans Summers
http://www.HansSummers.Com

"gil" <gilpi@mindspring.com> wrote in message
news:a84etv$e9s$1@nntp9.atl.mindspring.net...
> Im interested in building a very simple CW QRP transmitter for 40, 30 or
20
> m
> Any guidance, web sites or plans appreciated
>
> Gil
>
>
>

2508. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 16:06:55 UTC
From: "Michael P. Williams" <williams@fdt.net>
Message-ID: <3CA9D71F.7728E219@fdt.net>
Source record: 45099
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

AB Brown:

I have a matched pair of 6JS6C's. Japanese, New Old Stock, etc...
$40 shipped to the lower 48. I also have schemos for the FT101ZD
which uses 6146's in the output stage. If you are interested,
you can get my info at qrz.com. (sorry about the spam paranoia)

Mike Williams
NZ4K

AB Brown wrote:
>
> As most who read my posts are already aware, I have blown 6JS6C tubes in my
> FT-101ee. For replacement, I was going to try to obtain a matched
> replacement set until I found out the price. A well known firm just quoted
> GE and NEC prices for a matched pair of 6JS6C at $135 and $160,
> respectively. I recently purchased this FT-101 for $150, so it doesn't make
> much sense to spend more than I paid on a new set of tubes. So, I'm
> wondering about personal experiences converting to 6146B tubes, based on a
> fairly recent past QST article. Any successes, failures, or any other tips
> would be much appreciated.
>
> Thanks,
> AB

2509. Re: Q of two coils in series

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 17:00:21 UTC
From: la8ak.xnd@online.no
Message-ID: <3ca8cce7.191927869@news.online.no>
Source record: 45100

thanks for the replies

Posted the question by mistake and cancelled it immediately, but as
sometimes happens for some reasons I seem to get more replies when I
cancel the original post.....
I also found the formula (you know how quiet it is during Easter), but
thought it was easier to calculate the series resistances at a
frequency and add them to calculate the Q.

You can't walk around and remember all sorts of formulas and it is
very seldom you need this calculation, I haven't needed it before
constructing a 136kHz converter, where to coils were added in series.

The worst problem was to find a 20+50pF tuning capacitor, and I ended
up with connecting two FM sections together and removing rotor plates
from an AM section, hi. Tried to build a 60kHz xtal filter, but it was
difficult and spectrum analyzer was no help, but a two coil LC BPF
seems to be sharp enough

73
Jan-Martin
LA8AK

On 1 Apr 2002 13:05:22 -0800, k7itm@aol.com (Tom Bruhns) wrote:

>Hi Jan-Martin,
>
>Simply reducing Mike's calculations to a formula, you get
>
>Qt = (L1+L2)/(L1/Q1+L2/Q2)
>
>and in fact, it's just what you describe as well. You'll be helped
>some if the coils share fields in a way that increases the inductance.
>
>Cheers,
>Tom
>
>la8ak.xnd@online.no (J M Noeding) wrote in message news:<3ca65859.30988286@news.online.no>...
>> Hi
>>
>> What is the formula for calculating Q of two coils in series? In this
>> case I wish to connect a 1.8mH coil (Q=650) in series with a 150ΩH
>> coil (Q=50)
>> I am quite aware of calculating series resistance and adding for the
>> two coils, ending up with Q=435 on 150kHz, but hoped it was an easier
>> way for the next calculation

>>
>> 73
>> Jan-Martin
>> LA8AK

--
remove ,xnd to reply

2510. Re: rf training

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 17:03:17 UTC
From: SkipP <skipp@pilotNOSPAMPLEASE.ucdavis.edu>
Message-ID: <a8co8l$4j4$2@woodrow.ucdavis.edu>
Source record: 45101

Your best bet is to start build project from the ARRL and Radio Handbooks.
skipp

2511. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 18:13:20 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0204021013.2dfd7c29@posting.google.com>
Source record: 45103

[snipped]

"Gary Glaenzer" <nobulltrans@mchsi.com> wrote in message
news:<Sc7q8.149331$Yv2.45426@rwcrnsc54>...
> this an April Fools thing, isn't it?
>
>
> "Martin Wehner" <martin@cyclotomic.com> wrote in message
> news:3CA8F998.36D619D5@cyclotomic.com...

> > Martin Wehner (KG6KLF)

So, he passed his license test an doesn't know the first thing about
how radios work? He never heard of the ARRL handbook?

2512. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 18:16:05 UTC
From: Joe Mama <joemama@prozac.net>
Message-ID: <18sjaugqghbtccr73tgvigu6g0qmk4i3g8@4ax.com>
Source record: 45107
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Tue, 2 Apr 2002 03:23:25 -0800, "Wayne" <wayneleake@wayneleake.net>
wrote:

> Part of the reason that tube prices went up is due to fewer being made and
> sold.
> I saw this while working in my brothers TV repair shop.

I realise this, but such has not always been the case. People in general
weren't so greedy and money hungry until just a few decades ago, and were
more willing to give things away to those in need. It's not so much that
people nowadays want money for their goods, but rather the outrageous profit
margins that perpetually rise because of "lack of availability" and the lust
for money on the part of those who hold us in virtual consumer slavery..

Example: I *used* to collect coins as a *hobby*. Why is it that when a new
commemorative coin such as the Susan B. Anthony or Eisenhower dollar, the
Kennedy half dollar or the new state quarters are issued, the yuppie idiots
immediately run down to the banks and buy hundreds or thousands of them to
stick up in a closet and sit for decades, and save *every* single one that
they get in change, thus limiting the legitimate collectors of the pleasure
of finding and/or affording them for their hobbies? The same can be held
true for vintage ham radio equipment, parts and accessories..

I'm from the old school when people put more value on kindness, reason and
human compassion than riches, and i'm not at all impressed by what I see
nowadays. There are entirely too many selfish people in the world today..

> 6146's are much lower priced compared to those 6js6c's, at least on the web
> site I had located by doing a search..
> And, IMO, are a bit more durable.
> Though I never used them to replace the 6js6c's...
> Need to change the socket for that.

-jm

1968 XLCH under construction
1984 XR-1000
1987 Jaguar XJ6 Vanden Plas

To return mail no spam, change the reply address to:

"joemama at rarebird dot net"

2513. Re: Antenna for 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 18:24:01 UTC
From: Martin Wehner <martin@cyclotomic.com>
Message-ID: <3CA9F741.30037BDC@cyclotomic.com>
Source record: 45102

Hello Doug-
Hello xpyttl-

Thank you both so much for your feedback. You answered a lot of my
questions and it all is starting to make a bit more sense.
I am going to go back and re-read the chapter on transformers in the
Handbook.

Thank you again for your help. It is greatly appreciated!

Martin

Martin Wehner (KG6KLF)

e-mail: <martin@cyclotomic.com>
web: http://www.cyclotomic.com/~martin

2514. Re: Antenna for 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 18:29:55 UTC
From: Martin Wehner <martin@cyclotomic.com>
Message-ID: <3CA9F8A3.FCF1F699@cyclotomic.com>
Source record: 45104

Hello Ryan-

Thank you very much for your input.

KC8PMX wrote:
> Connect an SWR meter to verify if the external antenna if within basic
> tolerances. Most new transcievers have some sort or form of protection
> against this but checking the antenna out cannot hurt.

I will do that. Maybe I can pick one up used at a swap meet.
Anything special to look out for? Any good/bad brands to get/avoid?

> The simple "quick and dirty" antenna using a SO-239 antenna is a great and
> cheap antenna. I just build one and it works great. With the max output of
> this particular HT I have gotten over 30 miles with this antenna. Mounted
> the SO-239 connector in the end of a 10 foot PVC pipe and mounted the other
> end to a camera tripod and I have a wonderful portable antenna. (the
> tripod's head was broken off before I got it.)

That's a great idea. Thanks a lot. Good to know that building an antenna
like that will be an improvement.

> Only building codes maybe. Make this into what is called a Vent-tenna. Use
> a coupler to attach it to the "stink-pipe" coming thru your roof.

That sounds like a wonderful idea. I think this house has a few of those
(vents, that is).
Do you have links to any web-site showing pictures of such an
installation? It'd be neat to see what somebody else has set up.

Thanks again for your input!

Martin

Martin Wehner (KG6KLF)

e-mail: <martin@cyclotomic.com>
web: http://www.cyclotomic.com/~martin

2515. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 18:50:24 UTC
From: Martin Wehner <martin@cyclotomic.com>
Message-ID: <3CA9FD70.9FE117FD@cyclotomic.com>
Source record: 45105

Hey Peter-

Thanks so much for your reply. It is greatly appreciated.
I do have a few more questions and would love to hear your input if you have some more time:

Peter Rachow wrote:
> With such a mixer it isn't possible to build an AM transmitter.
> This is due to the fact that an AM signal requires a carrier
> that in this case unfortunately ;-)) is suppressed by the
> balanced mixer. You need to apply quite a different modulator
> design. If you need one, send me an e-mail.

Couple of questions:

(1) What would a diode mixer like that be used for then?

(2) I was under the impression that suppressing the carrier was a good thing to do in AM transmissions. It means that you don't have to waste power on the carrier, which doesn't really carry any information anyways (Please(!) correct me if I am wrong).

(3) Yes, please, I'd love to see a different design. Feel free to e-mail it to me directly at martin@cyclotomic.com
Thanks!
I got some feedback from the people in sci.electronics.basic and have seen some other designs already, but it can't hurt to see another one.

(4) If a carrier is always necessary, what about single-sideband suppressed carrier transmissions?
I thought the name implied that the carrier signal was not present in the output anymore?

> Not easy to decide without a picture. Could you take a photo of
> your scope's screen and put it to a website or e-mail it? It
> would make it easier to discern the potential problems you are
> facing.

Yeah, I know that without a picture one can't really tell. Sorry everyone :(
Unfortunately, I do not have a digital camera, so I don't think it could get that done in a timely manner.
But looking at the image you put up on your page (thank you!), it is quite clear that mine doesn't look like that and that I am still ways away from my goal :)
No problem, though: it's always fun to learn.

I'll wait to hear from you regarding the diode mixer there, but I do have one question I can ask already: would any and every AM-modulated output wave-form look like the one you posted on your site? Regardless of the type of modulation (i.e. DSBFC, SSBFC, SSBSC)?

> Depends on the distance you want to hear your signal. Within
> your house a ferrite antenna could be sufficient. If you want
> more, a wire antenna is recommended, but you must have a lot of
> space for it. Medium waves are not to be covered with handy
> antennas ;-))

OK, very silly question: what exactly is a ferrite antenna? Are we talking about turns of magnet-wire around a ferrite core? Similar to what they use(d) in (old) radios?

Thank you again for your feedback.
Congrats on your book, btw! I checked out your web-site and saw the reference to it. Very neat.

If it's easier for you, feel free to reply to my e-mail address in German.

Martin

Martin Wehner (KG6KLF)

e-mail: <martin@cyclotomic.com>
web: http://www.cyclotomic.com/~martin

2516. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 18:56:46 UTC
From: Martin Wehner <martin@cyclotomic.com>
Message-ID: <3CA9FEEE.FCD0F10F@cyclotomic.com>
Source record: 45106

JLB wrote:
> So, he passed his license test an doesn't know the first thing about
> how radios work? He never heard of the ARRL handbook?

I am very sorry if I offended you in any way.

I'd love to hear constructive input from anyone regarding the questions I posted, where I did refer to specific sections in the ARRL Handbook as well.

Should my questions be inappropriate for this newsgroup, I'll be happy to stop posting and will gladly ask some place else.

Thanks-

Martin

Martin Wehner (KG6KLF)

e-mail: <martin@cyclotomic.com>
web: http://www.cyclotomic.com/~martin

2517. Shielded small-loop design - An RFC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 19:52:32 UTC
From: Gollywog <_eng@ilos.net>
Message-ID: <4_nq8.655$%3.69273@news1.calgary.shaw.ca>
Source record: 45108

Everybody:

I'm looking for comments and suggestions on an electrostaticly shielded small-loop antenna circuit I'm working on. I wrote a great big post complete with links to diagrams and schematics. By the time I was done it looked more like a one page web site.

Please visit
http://www.ilos.net/~eng/rrahrfc.html

Thanks,
Mike (va4mgw)

********* \\\\lll//// *********
********** \ -- -- / **********
********** (\@ @/) **********
*** --oOOOo---(_)---oOOOo-- ***
Real men edit the registry!

2518. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 20:13:13 UTC
From: gaschafer@attbi.com
Message-ID: <3caa0fce.21210071@netnews.attbi.com>
Source record: 45109

Martin,

Don't pay any attention to some of the sarcastic remarks. Some guys think that they are radio experts and think that the ham license makes them that. There are many levels of understanding of radio. You are doing the right thing by trying circuits and asking questions and reading the books.

As far as your double balanced mixer goes that is the heart of an SSB transmitter or a double side band suppressed carrier transmitter. You can generate a regular AM signal (double side band with carrier) with the same mixer. The only difference is that you have to apply dc bias to the diodes to unbalance them so that you have carrier. Then applying modulation you will get a signal just like the broadcast band AM stations. If you remove the bias so that the modulator is again balanced you will have double side band suppressed carrier signal. In order to demodulate it the receiver has to re-insert the carrier.

SSB is generated in the same way as double side band suppressed carrier. But following the balanced modulator a sharp filter is used to filter out one of the side bands. Now you have SSB suppressed carrier. Again in order to demodulate it in the receiver you must re-insert a carrier in the receiver. If you now unbalance the balanced modulator so that you have some carrier you will have a single side band AM signal (with carrier). No need to reinsert the carrier at the receiver because it is being transmitted.

I do agree with one of the other posters though as far as a simple AM transmitter, you may be better off with a transistor amp being modulated by a transistor.

73
Gary K4FMX

2519. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 20:43:36 UTC
From: troglodite@aol.com
Message-ID: <20020402154336.02577.00002278@mb-dh.aol.com>
Source record: 45110

>I'm from the old school when people put more value on kindness, reason and
>human compassion than riches, and i'm not at all impressed by what I see
>nowadays. There are entirely too many selfish people in the world today..

You are so right. But you can't give up, there are still quite a few of us old school guys out there. I gave away a Radiotron Designers Handbook a couple of years ago to a youngster that said he'd learn from it. At the time, I didn't know they were fetching $100.00 and up on eBay. I got lots of requests asking if I had another one, and wouldn't you know it, I found two more. What did I do? I gave them away to the first two that convinced me they would actually use them. We all still correspond.

I believe the knowledge and goods we have are a gift, intended to be shared. I know there are lots of people that don't feel that way, but I don't have to join them.

Doug Moore KB9TMY (Formerly K6HWY)

2520. Need: Schematic and for KLM 10-140 Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 21:43:35 UTC
From: SAM <xxscottm@xxnetcommander.comxx>
Message-ID: <bCpq8.9532$TG6.1255872@bin5.nnrp.aus1.giganews.com>
Source record: 45111

Anyone have one that they can copy or scan for me? Any help would be appreciated. Take the XXXs out to reply to ScottmXXX@XXXcommunicomm.com

Thanks

2521. Re: PSU for PC from 12v car battery??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 21:52:03 UTC
From: Sylvan Butler <Znospam+noZs_0204@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnaaka3l.m1j.Znospam+noZs_0204@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 45128

On Mon, 1 Apr 2002 20:07:49 +0100, Chris <chris@ilson.co.uk> wrote:
> I have a requirement to run a Desk top type PC base unit in my car, and
> wonder if anybody out there has tackled the problems of supplying the
> various voltages and currents from a 12 volt battery.

Commercial or home-built (you did post in the homebrew group...).

http://sproggy.mp3car.com/psu.html has a progressive design. Lots
of good stuff for your task there under the mp3car.com domain...
Also see 12voltmp3.com

Here is another homebrew: http://cybersake.www.cistron.nl/carmp3/

And if you want commercial, be willing to pay. Rack mount folks
like cyberresearch.com could probably provide. Or check out
http://www.keypower.com/DC_power/DX-250H.htm

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. ##### change ^ to @ ##### |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Fight terrorism, arm the population!

2522. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 21:53:54 UTC
From: 4q <nospam@nospam-tek.com>
Message-ID: <a8d8ul0vqr@enews4.newsguy.com>
Source record: 45113

"Martin Wehner" <martin@cyclotomic.com> wrote in message
news:3CA8F998.36D619D5@cyclotomic.com...
> Hello All-
>
> My question this time is concerning a simple AM transmitter project I've
> been working on.
> Since I don't want to have to build my own receiver (yet), I decided to
> use a carrier-frequency of just around 1MHz, so that I can pick up the
> signal with a conventional radio.
> Let me state right away that I am only doing this for testing purposes.
> My goal is not to play a prank or mess with another commercial AM
> station's signal, I am just trying to learn.
>
> What I have done so far is the following:
> With some help from sci.electronics.basics, I believe I finally got rid
> of the notion that in AM, the carrier's amplitude is changed over time.
>
> I abandoned my initial designs and am now using a very simple design
> that uses 4 diodes. The ARRL Handbook calls this arrangement "diode
> double-balanced mixer".
> However, I am not using the transformers that the Handbook uses, but
> attached my carrier signal and modulating signal directly to the diodes.
> Question #1: why are the transformers necessary? (I am referring to the
> 2001 ARRL Handbook, page 15.15)
>
> I simulated the whole thing in Spice (without transformers); the output
> wave-form did not look like what I expected for it to, but running a FFT
> of the output in Mathematica shows that the carrier component is indeed
> suppressed, and that I have a LSB and a USB.
>
> I built the circuit and looked at its output with the oscilloscope. The
> output wave-form did not look like what Spice predicted it would look
> like, but I can live with that (after all my signal sources (RF and AF)
> are probably less than perfect).
>
> Question #2: what should the signal look like? Spice shows the output as
> a wave-form that follows the modulating signal in shape, but made up of
> the carrier frequency. It does not look like what I've seen as an AM
> wave-form before, where you have the top and bottom of the output
> "mirrored."
> Sorry I am doing such a bad job at describing this. If necessary, I can
> post the output to my web-site.
>
> The oscilloscope shows the output as just a band, with no discernible

> shape. It does look like I can see the wave-form jump up and down a bit
> when the AF changes, but when I applied a sine-wave of AF frequency to
> it, I didn't see the nice crisp shape I expected to see. When I trigger
> on the output signal itself, I can see the carrier frequency in there.
>
> Question #3: Does what I see on the scope indicate that I am not
> modulating the carrier enough?
> How would I go about changing the amount of modulation? Would I have to
> change the amplitude of the input signals? (Only possible to a certain
> extent, unless I build separate amplifiers).
>
> Note: I built the circuit on solderless breadboard by simply inserting
> components (without cutting their leads) and connecting nodes with wires
> where necessary. I am using simple 1N914 diodes. The carrier and AF
> source's amplitudes are the same as the ones I used for the Spice
> simulation.
>
> I used a standard radio and was able to pick up the signal I was
> producing.
> The interesting thing about this is that I was able to pick up the
> signal without any antenna attached to my circuit.
> The signal I picked up was very weak and changed strength, as I moved
> the receiving radio around my circuit.
>
> I then built a simple amplifier circuit, using a standard NPN BJT as
> amplifier (a simple Class A amplifier, if I am not mistaken).
> I am having a hard time looking at the signal on my scope, but it does
> look like the amplitude is greater now.
> In any event: signal reception was not improved even with the amplifier
> in place (I built it for 10x amplification).
>
> Question #4: What kind of an antenna could I hook up to my circuit? At a
> frequency of 1MHz, the signal's wave-length doesn't seem practical for
> the methods outlined in the Handbook.
> I tried connecting just a piece of wire to it and connecting another
> wire of equal length to my power-supply's ground in a feeble attempt at
> making a dipole, but to no avail. If something like this should work,
> what kind of wire should I be using?
>
> Question #5: I am a bit confused as to what the power-ratings for radios
> mean.
> If I say I am transmitting at 5W power, what does that really mean? Does
> the standard: P=V*V/R still hold? In the standard case of dealing with a
> 50 Ohm antenna, does that mean my final amplifier is outputting a
> voltage of +/- 15.81V across the antenna terminals?
> Does that mean that you may have hundreds of volts across the terminals
> for higher-power transmitters? How do you obtain these voltages? Would
> you use a transformer and then connect the antenna terminals directly to
> the transformer? Or does your actual power-supply have to supply these
> voltages?

>
> Thank you for reading all this. Even though my questions are very basic,
> I hope somebody out there can give me a hand in figuring out these
> things. Any help will be greatly appreciated!
>
> Thanks in advance! 73's
>
> Martin
>
> --
> Martin Wehner (KG6KLF)
>
> e-mail: <martin@cyclotomic.com>
> web: http://www.cyclotomic.com/~martin
> --

2523. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 21:55:15 UTC
From: Grey Fox <parrfoo@sympatico.ca>
Message-ID: <B8CF92F3.2E1B%parrfoo@sympatico.ca>
Source record: 45112
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

in article 18sjaugqghbtccr73tgvigu6g0qmk4i3g8@4ax.com, Joe Mama at joemama@prozac.net wrote on 4/2/02 1:16 PM:

> On Tue, 2 Apr 2002 03:23:25 -0800, "Wayne" <wayneleake@wayneleake.net>
> wrote:
>
>> Part of the reason that tube prices went up is due to fewer being made and
>> sold.
>> I saw this while working in my brothers TV repair shop.
>
> I realise this, but such has not always been the case. People in general
> weren't so greedy and money hungry until just a few decades ago, and were
> more willing to give things away to those in need. It's not so much that
> people nowadays want money for their goods, but rather the outrageous profit
> margins that perpetually rise because of "lack of availability" and the lust
> for money on the part of those who hold us in virtual consumer slavery..
>
> Example: I *used* to collect coins as a *hobby*. Why is it that when a new
> commemorative coin such as the Susan B. Anthony or Eisenhower dollar, the
> Kennedy half dollar or the new state quarters are issued, the yuppie idiots
> immediately run down to the banks and buy hundreds or thousands of them to
> stick up in a closet and sit for decades, and save *every* single one that
> they get in change, thus limiting the legitimate collectors of the pleasure
> of finding and/or affording them for their hobbies? The same can be held
> true for vintage ham radio equipment, parts and accessories..
>
> I'm from the old school when people put more value on kindness, reason and
> human compassion than riches, and i'm not at all impressed by what I see
> nowadays. There are entirely too many selfish people in the world today..
>
>
>> 6146's are much lower priced compared to those 6js6c's, at least on the web
>> site I had located by doing a search..
>> And, IMO, are a bit more durable.
>> Though I never used them to replace the 6js6c's...
>> Need to change the socket for that.
>
> -jm
>
> 1968 XLCH under construction
> 1984 XR-1000
> 1987 Jaguar XJ6 Vanden Plas
>

> To return mail no spam, change the reply address to:
>
> "joemama at rarebird dot net"

Good thoughts, Joe. I'm with you on your comments. I remember the times we left the front door open, 'cos we couldn't find the key and it didn't matter
Regards
Old Grey Fox

2524. Re: QRP transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-02 22:54:08 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3CAA36F2.1A61A7E1@alma.demon.co.uk>
Source record: 45114

Scrounger wrote:
>
> The Arkansas QRP Club sells the original Tuna Tin 2 kit for $12.00....grab
> that and you're on 40m in about an hour.
>
> Here is a great place to look at one:
>
> http://clocksusa.com/tuna/tt2page1.html
>
> The Tuna Tin 2 is now available in kit form from the Ft. Smith QRP Group.
> Your cost just $12 U.S. each which includes shipping/handling.
> Group buys of 10 or more $10 each and shipping is on them. Foreign $15 U.S.
> Make checks payable to jay Bromley
>
> Jay Bromley W5JAY
>

Lots of nice photos, but where's the schematic?

regards...

--Gary

2525. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 00:16:59 UTC
From: Zoran Brlecic <WA7AA@attbi.com>
Message-ID: <3CAA49F8.63CD01A1@attbi.com>
Source record: 45115
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Joe Mama wrote:

> It's not so much that
> people nowadays want money for their goods, but rather the outrageous profit
> margins that perpetually rise because of "lack of availability" and the lust
> for money on the part of those who hold us in virtual consumer slavery..

It's called free market capitalism, where the demand regulates supply. If there are a few items many people want, prices will go up. It's a beautiful concept when you think about it. So simple and natural.

> Example: I *used* to collect coins as a *hobby*. Why is it that when a new
> commemorative coin such as the Susan B. Anthony or Eisenhower dollar, the
> Kennedy half dollar or the new state quarters are issued, the yuppie idiots
> immediately run down to the banks and buy hundreds or thousands of them to
> stick up in a closet and sit for decades, and save *every* single one that
> they get in change, thus limiting the legitimate collectors of the pleasure
> of finding and/or affording them for their hobbies?

Because they know that years later collector idiots will pay good money for shiny quarters no one bothered to save when they were widely available?

> The same can be held
> true for vintage ham radio equipment, parts and accessories..

The solution is simple: we have to establish a Central Committee which will nationalize all the vintage ham radio equipment and which will then redistribute it according to the needs of the people.

> I'm from the old school when people put more value on kindness, reason and
> human compassion than riches, and i'm not at all impressed by what I see
> nowadays. There are entirely too many selfish people in the world today..

Bullshit. This is nothing but geezers' cry about the good old times. It's never as it used to be - it was always better when we were young, wasn't it? Even when there was slavery, tyranny, plague, no elections, no electricity, no food, no fire...

73 .... Zoran WA7AA

2526. SL6440 as modification to HF transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 00:22:50 UTC
From: la8ak.xnd@online.no
Message-ID: <3caa4855.27665211@news.online.no>
Source record: 45117

I am promissed some SL6440 devices and wonder if somebody has
experience in replacing other ringmixers with this device.
FT-902 has a ringmixer of unknown data, but IP3 isn't particularly
good so I wonder if it is easy to use SL6440 instead without too much
problems. FT-902 also has a J310 buffer amplifier, but I am not
certain if it is really 50 ohm.
-1dB gain for SL6440 is 6dB better than any schottky diode ring mixer.

73
Jan-Martin
LA8AK

PS. just finished my 136kc converter project tonight, tnx to all
contributors!
--
remove ,xnd to reply

2527. Re: top coupled bandpassfilter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 00:22:51 UTC
From: la8ak.xnd@online.no
Message-ID: <3caa499e.27994317@news.online.no>
Source record: 45116

Thanks to all contributors. I finished the 136kHz converter project. The 40673 1st converter with IF filter has power gain of 47dB, I am surprised! Used an S042P as second mixer, IP3 products seem not important as it is 0.5kHz bandwidth filter ahead of this mixer, it converts from 60kHz to 3.5MHz. Only problem is that balance for S042P could be better, so I must check up later. Also injection to 40673 is low and should be increased from 0.2 to 0.4V RMS to be optimum according to RCA manual.

Will study the received material later.

73
Jan-Martin
--
remove ,xnd to reply

2528. Re: Q of two coils in series

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 00:24:25 UTC
From: la8ak.xnd@online.no
Message-ID: <3caa4b35.28401574@news.online.no>
Source record: 45118

On Mon, 1 Apr 2002 23:29:51 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>Q is a property of reactance which may be either high or low, good or bad.
>
>Like SWR, it is a quantity which is of little direct use except for
>calculating other characteristics of a circuit which ARE useful.
>
>Q meters at least indicate what they are purported to measure. Whereas SWR
>meters don't, they delude the users.
>
>
Thanks to all contributors. I finished the 136kHz converter project.

73
LA8AK
--
remove ,xnd to reply

2529. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 02:22:48 UTC
From: Mr G H Ireland <igor@argonet.co.uk>
Message-ID: <na.b524564b21.a70320igor@argonet.co.uk>
Source record: 45119

You say," With some help from sci.electronics.basics, I believe I finally got rid of the notion that in AM, the carrier's amplitude is changed over time."

But it is! Let your DSB amplitude modulation frequency be 1Hz.
Your carrier will vary from 0v.pk.-pk. to 2 times unmodulated carrier voltage. At the same time, this is also an unmodulated carrier, accompanied by two side-bands at the carrier frequency plus 1Hz and at the carrier frequency minus 1Hz.

The three frequencies reinforce and cancel at periods of one second.

Both ways of looking at the thing are equally valid. They are just two ways of expressing the same thing. If you displayed it on an oscillograph with a slow time-base, you would see the carrier wave as a fuzzy area increasing and decreasing at 1Hz. If you had a sufficiently selective receiver you would detect three frequencies at Fc, Fc+1 and Fc-1.

To generate A.M. you need a circuit whose gain can be varied at the modulating frequency, which is effectively what your unblanced diode bridge is.

Does this help or confuse?
Regards, G3CCL.

--

-- -- -- -- -- --- --
|__||__)/ __/ \|\ ||_ | /
| || __/__/| \||__ | /...Internet access for all Acorn RISC machines
_____________________________/ igor@argonet.co.uk

2530. Re: QRP transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 02:26:13 UTC
From: "M.S. Bob" <msbob@hotmail.com-edy>
Message-ID: <3CAA6845.36127848@hotmail.com-edy>
Source record: 45120

Gary Morton wrote:
>
> Scrounger wrote:
> >
> > The Tuna Tin 2 is now available in kit form from the Ft. Smith QRP Group.
> > Your cost just $12 U.S. each which includes shipping/handling.
> > Group buys of 10 or more $10 each and shipping is on them. Foreign $15 U.S.
> > Make checks payable to jay Bromley
> >
> > Jay Bromley W5JAY
>
> Lots of nice photos, but where's the schematic?

Source, the ARRL TIS:

Build A Tuna-Tin 2 (1,870,395 bytes, PDF file)
<http://www.arrl.org/tis/info/pdf/7605014.pdf>
QST May 1976, pp. 14-16
Ham radio lost its kick? Go QRP with this weekend project
transmitter! WAS with a 40-meter half-watter? You betcha!

The Tuna Tin 2 Today (168,122 bytes, PDF file)
<http://www.arrl.org/tis/info/pdf/0003037.pdf>
QST March 2000, pp. 37-40
The revival of a legend
Note: the TT2 Kit is now available from the Ft Smith QRP Group.
Contact Jay Bromley W5JAY for details (w5jay@alltel.net)

2531. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 02:56:24 UTC
From: Martin Wehner <martin@cyclotomic.com>
Message-ID: <3CAA6F58.72BA91E1@cyclotomic.com>
Source record: 45122

Hello Mr. Ireland-

Thanks for your reply!

Mr G H Ireland wrote:
> But it is! Let your DSB amplitude modulation frequency be 1Hz.
> Your carrier will vary from 0v.pk.-pk. to 2 times unmodulated carrier
> voltage. At the same time, this is also an unmodulated carrier, accompanied
> by two side-bands at the carrier frequency plus 1Hz and at the carrier
> frequency minus 1Hz.
>
> The three frequencies reinforce and cancel at periods of one second.

OK.
Thanks for pointing that out.
I went back to my text-book and found what you are describing in there
as well. Along with a nice diagram showing how the different waves would
add (they illustrated this concept using phasor addition, showing the
LSB, USB, and carrier components).

This is slowly starting to make sense...

Now, theoretically, is the carrier's amplitude really varied by the
modulating signal? Or does the output wave-form's amplitude vary
depending on the modulating signal?

My text-book says that the voltage distributing in the output wave-form
would be:
Vam(t)=(Vc+Vm sin(2 pi fm t)) sin(2 pi fc t)
i.e. that the carrier's amplitude does not depend on the modulating
signal.

> To generate A.M. you need a circuit whose gain can be varied at the
> modulating frequency, which is effectively what your unblanced diode bridge
> is.

This how I started to approach the issue at first, but with no luck.
I tried hooking up a simple BJT amplifier circuit using an NPN
transistor. I fed the modulating signal into the transistor's base and
connected the transistor's collector to the circuit generating my
carrier.
I couldn't get that to work in either real life or in Spice.
Is that the idea, though? Is that one way to generate AM modulated
output?

My text-book shows a circuit where they reverse this setup, i.e. feed
the carrier into the base and "couple in" (correct word?) the modulating

signal via a transformer, fed into the circuit at the emitter. The output is taken at the collector (with a resistor to the supply) and high-pass filtered with a simple RC stage to get rid of the modulating signal's frequency components.
The only explanation they give of the circuit is that because it is operating nonlinearly (either in saturation or cutoff), modulation is performed.
Why would it be operating in either saturation or cutoff? Because the voltage level at the emitter is raised or lowered? I.e. brought up so high that the base-emitter junction is not forward-biased anymore and so low that the collector voltage is pulled down to within -what was it again?- of the base-voltage?
Now, assuming that it does operate in either saturation or cutoff, why would that perform modulation?
The output wave-form they show looks like the carrier signal added to the modulating signal (i.e. the carrier signal superimposed on the modulating signal).

I guess I'll go back and try that circuit again in Spice and on the breadboard.

Thanks again for your post! It did make things a bit clearer.
Thanks!

Martin

Martin Wehner (KG6KLF)

e-mail: <martin@cyclotomic.com>
web: http://www.cyclotomic.com/~martin

2532. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 03:14:33 UTC
From: Martin Wehner <martin@cyclotomic.com>
Message-ID: <3CAA7399.EE6A8E51@cyclotomic.com>
Source record: 45123

Hello Gary-

Thanks for your detailed reply.

Gary Schafer wrote:
> AM signal (double side
> band with carrier) with the same mixer. The only difference is that
> you have to apply dc bias to
> the diodes to unbalance them so that you have carrier. Then applying
> modulation you will get a

Great! I had read that in one of my text-books, I believe, and it even kind of made sense.
I looked at how the diodes would switch for the input signal and understand why the output wave-form looks the way it does.

> I do agree with one of the other posters though as far as a simple AM
> transmitter, you may be
> better off with a transistor amp being modulated by a transistor.

OK. So could I build a simple transistor-based (I am most comfortable with simple NPN BJTs) amplifier that amplifies the carrier depending on the modulating signal?
Would that mean that I feed the modulating signal into the transistor's base and the carrier signal into the transistor's collector (all with appropriate DC offsets, of course)?

Another thought I had (I haven't had time to experiment) would be to setup an amplifier where I feed the carrier into the transistor's (Q1) base and connect another transistor's (Q2) collector to Q1's emitter.
The modulating signal would be fed into Q2's base.
The second transistor would then control the current that could flow through Q1. If you took the output off Q1's collector resistor to Vcc, you would then have a signal that is changed in strength according to the modulating's signal strength, at the carrier frequency.
Would that work? Sorry if I am totally off with this one. It was just a thought...

Thanks again for your input.
73s

Martin

Martin Wehner (KG6KLF)

e-mail: <martin@cyclotomic.com>
web: http://www.cyclotomic.com/~martin

2533. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 03:42:13 UTC
From: Harold Burton <hwburton@swbell.net>
Message-ID: <pSuq8.73849$Ou2.1555037294@newssvr30.news.prodigy.com>
Source record: 45124
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

"Zoran Brlecic" <WA7AA@attbi.com> wrote in message
news:3CAA49F8.63CD01A1@attbi.com...
> The solution is simple: we have to establish a Central Committee which
will
> nationalize all the vintage ham radio equipment and which will then
redistribute
> it according to the needs of the people.

Eletrosocialism?

2534. Re: QRP transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 03:54:54 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <bWuq8.1441$Mx3.278317@news1.iquest.net>
Source record: 45125

Neat little transmitter...

Steve VE7SL managed to pull of a WAS with the little bugger last year (maybe 2000).

Lot's of fun to be had with QRPp operations.

See http://www.qrpp-i.com

"M.S. Bob" <msbob@hotmail.com-edy> wrote in message news:3CAA6845.36127848@hotmail.com-edy...
> Gary Morton wrote:
> >
> > Scrounger wrote:
> > >
> > > The Tuna Tin 2 is now available in kit form from the Ft. Smith QRP Group.
> > > Your cost just $12 U.S. each which includes shipping/handling.
> > > Group buys of 10 or more $10 each and shipping is on them. Foreign $15 U.S.
> > > Make checks payable to jay Bromley
> > >
> > > Jay Bromley W5JAY
> >
> > Lots of nice photos, but where's the schematic?
>
> Source, the ARRL TIS:
>
> Build A Tuna-Tin 2 (1,870,395 bytes, PDF file)
> <http://www.arrl.org/tis/info/pdf/7605014.pdf>
> QST May 1976, pp. 14-16
> Ham radio lost its kick? Go QRP with this weekend project
> transmitter! WAS with a 40-meter half-watter? You betcha!
>
> The Tuna Tin 2 Today (168,122 bytes, PDF file)
> <http://www.arrl.org/tis/info/pdf/0003037.pdf>
> QST March 2000, pp. 37-40
> The revival of a legend
> Note: the TT2 Kit is now available from the Ft Smith QRP Group.
> Contact Jay Bromley W5JAY for details (w5jay@alltel.net)

2535. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 04:40:00 UTC
From: norway@passport.ca
Message-ID: <ylvq8.10632$je5.92537@nnrp1.uunet.ca>
Source record: 45126

You've been waiting only three weeks?? My last order (two years ago) took
2 months to travel to Toronto, Canada. What with the increased security after
Sept 11, you should be more patient unless you paid for Air Express service.

David, VA3DKS

In article <Bdiq8.44473$DE4.6016@afrodite.telenet-ops.be>, "maxpowa"
<maxpowa@iwontellsorry.com> wrote:
>
>"Gollywog" <_eng@ilos.net> schreef in bericht
>news:ud5p8.232019$kb.13109030@news1.calgary.shaw.ca...
>>
>> Anybody:
>>
>> What's up with Dan's Small Parts? I'm sitting on an order, waiting for the
>> monthly change of catalog he mentions at http://www.fix.net/dans.html and
>> there has been nothing since Feb 11/02. Worse yet I've tried 5 times
>> (various days & times) and I can't get an answer on the phone. At this
>point
>> I'm glad I'm still holding the money order! I've done a google and there
>> don't seem to be any complaints to date - what's up?
>>
>> Mike
>> va4mgw
>
>I ordered from dan's 3 weeks ago myself, first time I ordered from him, have
>been anoyed the last week, running to the mailbox every day, because I'm
>waiting for some stuff, and 3 weeks is to long, how the hell can it take
>someone 3 weeks to put some bags in a box, label it and put it in the mail.
>Im' very glad also I've kept my part of the money order card, the ostal
>office promissed me they would get my money back incase of any problems.
>Didn't try to call, because a call to the states from here (belgium) is
>quite expensive.
>
>Steven
>
>

2536. Re: Antenna for 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 04:42:50 UTC
From: KC8PMX <kc8pmx@NOSPAMdiamondcs.net>
Message-ID: <a8ete83mi3@enews3.newsguy.com>
Source record: 45137

> KC8PMX wrote:
> > Connect an SWR meter to verify if the external antenna if within basic
> > tolerances. Most new transcievers have some sort or form of protection
> > against this but checking the antenna out cannot hurt.
>
> I will do that. Maybe I can pick one up used at a swap meet.
> Anything special to look out for? Any good/bad brands to get/avoid?

Check out www.aesham.com they have a good selection. Ask for their catalog and that should give ya some good ideas as to what to purchase. First and obvious choice is make sure it is designed for the frequencies you wish to test.

>
> > The simple "quick and dirty" antenna using a SO-239 antenna is a great
and
> > cheap antenna. I just build one and it works great. With the max
output of
> > this particular HT I have gotten over 30 miles with this antenna.
Mounted
> > the SO-239 connector in the end of a 10 foot PVC pipe and mounted the
other
> > end to a camera tripod and I have a wonderful portable antenna. (the
> > tripod's head was broken off before I got it.)
>
> That's a great idea. Thanks a lot. Good to know that building an antenna
> like that will be an improvement.

Anything over the rubber ducky is an improvement. Check AES at the above listed website as they have some better antennas to replace the factory rubber ducky.

>
> > Only building codes maybe. Make this into what is called a Vent-tenna.
Use
> > a coupler to attach it to the "stink-pipe" coming thru your roof.
>
> That sounds like a wonderful idea. I think this house has a few of those
> (vents, that is).
> Do you have links to any web-site showing pictures of such an
> installation? It'd be neat to see what somebody else has set up.
>

That antenna above and the ventenna are listed in the ARRL Antenna Handbook or the ARRL Handbook. Check them out or maybe someone else here has knowledge of a link to a website where you can find more. Both ARRL books

are good reference materials for your library though.

> Thanks again for your input!
>

No sweat.... Some others would be extremely rude, and make uncalled-for comments, but I rather be helpful. I never got the assistance I wanted in the past, so I feel complelled to help you.

Ryan KC8PMX

2537. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 05:54:21 UTC
From: Lou <tech@dp.net>
Message-ID: <a8e5p2$6e1$1@news.dp.net>
Source record: 45127

Face it, the "Mail" SUCKS.....

I had a package sent to me from New York and it took a week to the day it was shipped. I'm only 300 miles from the origination - in PA. Then, I shipped a package 2nd day "Priority" to LA area. It took 2 weeks and 2 days to get there. Priority - my ass. I have a package coming from Alaska. The dogsled or Iceberg express must have hit a snag. It's been almost a month......So it may not be the shipper's fault. Blame the freaking Postal Service who wants "another" raise..... IF any of US failed to deliver according to OUR terms as they do, we would be busted. The BBB and any other agency would be down our throats..... I'm going UPS if I can help it, from here in - especially with anything with any amount of weight to it. I've never had any problems with them.

Lou/Tech@DP.NET

"David Snowdon" <norway@passport.ca> wrote in message news:yIvq8.10632$je5.92537@nnrp1.uunet.ca...
> You've been waiting only three weeks?? My last order (two years ago) took
> 2 months to travel to Toronto, Canada. What with the increased security after
> Sept 11, you should be more patient unless you paid for Air Express service.
>
> David, VA3DKS
>
>
> In article <Bdiq8.44473$DE4.6016@afrodite.telenet-ops.be>, "maxpowa"
> <maxpowa@iwontellsorry.com> wrote:
> >
> >"Gollywog" <_eng@ilos.net> schreef in bericht
> >news:ud5p8.232019$kb.13109030@news1.calgary.shaw.ca...
> >>
> >> Anybody:
> >>
> >> What's up with Dan's Small Parts? I'm sitting on an order, waiting for the
> >> monthly change of catalog he mentions at http://www.fix.net/dans.html and
> >> there has been nothing since Feb 11/02. Worse yet I've tried 5 times
> >> (various days & times) and I can't get an answer on the phone. At this
> >point
> >> I'm glad I'm still holding the money order! I've done a google and there

> >> don't seem to be any complaints to date - what's up?
> >>
> >> Mike
> >> va4mgw
> >
> >I ordered from dan's 3 weeks ago myself, first time I ordered from him,
have
> >been anoyed the last week, running to the mailbox every day, because I'm
> >waiting for some stuff, and 3 weeks is to long, how the hell can it take
> >someone 3 weeks to put some bags in a box, label it and put it in the
mail.
> >Im' very glad also I've kept my part of the money order card, the ostal
> >office promissed me they would get my money back incase of any problems.
> >Didn't try to call, because a call to the states from here (belgium) is
> >quite expensive.
> >
> >Steven
> >
> >

2538. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 08:24:04 UTC
From: Peter Rachow <peter.rachow@t-online.de>
Message-ID: <a8ef3g$s44$02$1@news.t-online.com>
Source record: 45129

Martin,

>(1) What would a diode mixer like that be used for then?

Generally it is used to mix to frequencies f1 and f2 so that you
can see two new output frequencies at the output of the mixer
device. These frequencies are:
- the summation signal of the two (f1+f2) and
- the substaction signal (f1 - f2 or f2 - f1 if f2 is higher
than f1).

Among all the mixer circuits that are common the DBM ensures the
maximum suppression of the former input signals at the mixer's
output side, so that (theoretically) only the new signals
appear. Generally it is used to generate a double sideband
signal if you mix an rf signal with an af signal. One of these
two frequencies later is filtered so that you get a single
sideband signal (SSB). Other applications for DBMs are

- Generating an intermediate frequency in a receiver
- Mixing a (e. g. 9 MHz) SSB signal to its destination frequency
e. g. creating a ham band signal.

>(2) I was under the impression that suppressing
>the carrier was a good thing to do in AM transmissions.
>It means that you don't have to waste power on the
>carrier, which doesn't really carry any information anyways
>(Please(!) correct me if I am wrong).

No, definetely not. ;-)) The carrier is required in the
reception process. An AM signal consists of three distinct
components that are emmitted simultanously:

- The AM carrier (fC)
- The upper side band signal (USB which is fcarrier + faudio)
- The lower side band signal (LSB which is fcarrier - faudio)

This is a bad idea if you take only the energy considerations.
But the AM carrier is essentially required for demodulation
because in the receiver there are mixers (sometimes DBMs) that
substract for example the fUSB - fC and therefore get back the
audio signal in its original frequency range. If there is no
carrier you cannot demodulate the signal.

>(3) Yes, please, I'd love to see a different design.
>Feel free to e-mail

OK, I'll look into my library. But some circuits are commented in German, I hope that won't confuse you. ;-)

>(4) If a carrier is always necessary, what about single-sideband
>suppressed carrier transmissions?

That's the main difference between AM and SSB. An AM signals transmits a fixed carrier frequency plus the USB and LSB signal. on the opposite the SSB signal consists only of a USB *or* an LSB rf signal. For the reception and demodulation process of an SSB signal the neccessary carrier is injected into a mixer (we sometimes call this mixer "product detector") in the receiver. And now the former signal (which during transmission had no carrier) has now got some sort of 'artificial' carrier and the process of frequency substraction can take place. Demodulation of an AM or SSB signal is nothing than a final freqeuncy substraction so that the resulting frequency spectrum falls into the audio band.

In general AM and SSB signals can be demodulated by the same circuits. But, due to the fact that an AM signal comes with a carrier, you do not need to generate an "artificial" one. And, another benefit of AM: In this case the carrier has got the right frequency distance to the USB (and LSB) sidebands, so that the resulting audio frequencies sound natural (If you do not take into account the restricted bandwidth that distorts the signal somehow).

>I thought the name implied that the carrier signal
>was not present in the output anymore?

In AM signal it is an *essential* component of the signal spectrum.

>I'll wait to hear from you regarding the diode
>mixer there, but I do have one question I can
>ask already: would any and every AM-modulated
>output wave-form look like the one you posted on
>your site? Regardless of the type of modulation
>(i.e. DSBFC, SSBFC, SSBSC)?

Not, the shape of the signal depends on the modulation you use. If we take the most simple case, we can modulate a one-tone-audio frequency to an rf carrier.

In AM the outcome looks like the picture I put on my web site (100% modulation degree). The shape you see is a result of the fact that 3 frequencies are present at the same time (fCarrier, fUSB and fLSB) and that they are shifted in phase by the audio freqeuency and are only 1/4 of the fCarrier voltage.

In SSB the result of modulating a single af tone is only one constant sine wave signal. This is due to the fact, that two new

signals are generated if we mix ONE rf sig with ONE af sig and
that one of the resulting signals is suppressed in an SSB filter
.

Using DSB modulation it might look like the AM signal but the
cross points in the center of the sine wave might look
different.

>OK, very silly question: what exactly is a ferrite
>antenna? Are we talking about turns of magnet-wire
>around a ferrite core? Similar to what they use(d) in
>(old) radios?

Yep.

hth es 73!

Peter
DK7IH
--
http://www.peter-rachow.de

2539. Re: SL6440 as modification to HF transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 08:57:38 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <6uzq8.1523$QC1.152135@bgtnsc04-news.ops.worldnet.att.net>
Source record: 45130

If I was going to replace a diode ring mixer, it wouldn't be with a 6440; I would used something like the Siloconix SD5400 series of Quad JFET mixer. The IP3 would be better than either the diode ring type or the 6440, unless a Level 17 or Level 23 type of ring was used.
The 6440 was a pretty good device, but it required a fair amount of external components.

Pete KE9OA

J M Noeding <la8ak.xnd@online.no> wrote in message news:3caa4855.27665211@news.online.no...
> I am promissed some SL6440 devices and wonder if somebody has
> experience in replacing other ringmixers with this device.
> FT-902 has a ringmixer of unknown data, but IP3 isn't particularly
> good so I wonder if it is easy to use SL6440 instead without too much
> problems. FT-902 also has a J310 buffer amplifier, but I am not
> certain if it is really 50 ohm.
> -1dB gain for SL6440 is 6dB better than any schottky diode ring mixer.
>
> 73
> Jan-Martin
> LA8AK
>
> PS. just finished my 136kc converter project tonight, tnx to all
> contributors!
> --
> remove ,xnd to reply

2540. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 09:08:04 UTC
From: Joe Mama <joemama@prozac.net>
Message-ID: <coglausrhs75ie4budguvsp78c9b6tej40@4ax.com>
Source record: 45131
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Wed, 03 Apr 2002 00:16:59 GMT, Zoran Brlecic <WA7AA@attbi.com> wrote:

> It's called free market capitalism, where the demand regulates supply. If there
> are a few items many people want, prices will go up. It's a beautiful concept
> when you think about it. So simple and natural.

> Because they know that years later collector idiots will pay good money for shiny
> quarters no one bothered to save when they were widely available?

> The solution is simple: we have to establish a Central Committee which will
> nationalize all the vintage ham radio equipment and which will then redistribute
> it according to the needs of the people.

>> I'm from the old school when people put more value on kindness, reason and
>> human compassion than riches, and i'm not at all impressed by what I see
>> nowadays. There are entirely too many selfish people in the world today..

> Bullshit. This is nothing but geezers' cry about the good old times. It's never
> as it used to be - it was always better when we were young, wasn't it? Even when
> there was slavery, tyranny, plague, no elections, no electricity, no food, no
> fire...

I'm only fifty four, so I don't remember the bullshit examples that you
cited, but you're probably some young punk, dumb asshole or both who has no
respect or consideration for anything but himself and probably doesn't even
know what it was like when I grew up and doesn't care because of your self
centered attitude and government-media brainwashing that tells you what to
do, how to do it, when to take your Prozac and what to think cuz you lack
the mental capacity to make your own decisions..

You make me wanna puke..

-jm

1968 XLCH under construction
1984 XR-1000
1987 Jaguar XJ6 Vanden Plas

To return mail no spam, change the reply address to:

"joemama at rarebird dot net"

2541. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 09:43:43 UTC
From: Arthur Jernberg <stubby@comcast.net>
Message-ID: <i9Aq8.398562$uv5.33509525@bin6.nnrp.aus1.giganews.com>
Source record: 45132
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

Negative, you will probably need a good transciever and a linear amplifier.
"Melissa in Colorado" <melissa@NODARNSPAMupalliance.org> wrote in message
news:Xns91D898EE54503melissaNN0DARNSPAMup@206.124.0.13...
> "xpyttl" <xpyttl_nospam@earthling.net> bestowed such eternal wisdom upon
> us by saying from news:u9jjmb7rhoo4d3@corp.supernews.com:
> ...
> > If you really want to melt solder, take a peek at the stuff from
> Elecraft,
> > NorCal, Small Wonder Labs, OHR, Red Hot Radio, etc. etc. etc. Then look
> at
> > Homebrew stuff from K8IQY, NJQRP, Harry's Homebrew Homepage, EI9GQ, etc.
> > etc. In fact, if you go to QRP ARCI's links page, they must have a list
> of
> > 50 kit suppliers. You won't get the nice feeling of building an old
> > Heathkit (if you can stand to put it together after seeing the price),
> but
> > you will get a nicer rig for a bunch less money.
>
> BTW, it sounds interesting, but I'm not really into QRP. Is anyone making
a
> full featured all band HF transceiver kit that puts out full power? (
like
> 100-200 watts PEP out?)
>
> --
> - Melissa
> Somewhere in Colorado
>

2542. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 10:07:19 UTC
From: Peter Rachow <peter.rachow@t-online.de>
Message-ID: <a8ekpu$ug3$07$1@news.t-online.com>
Source record: 45133

Martin,

>My text-book says that the voltage distributing in the output
>wave-form would be:
>Vam(t)=(Vc+Vm sin(2 pi fm t)) sin(2 pi fc t)
>i.e. that the carrier's amplitude does not depend
>on the modulating signal.

That's correct. I've posted another picture showing how the 3 distinct frequency in an AM-signal are added to the typically looking AM frequency graph. A (not shown) 2 kHz "af" ist modualted to a 10 kHz "rf". The resulting frequencies are 10 kHz (the former carrier remaining uninfluenced) and the fUSB and fLSB sig. By simply adding them to a voltage summary signal you get the shape of the modulated AM sig.

See http://www.peter-rachow.de/amsignal2.jpg

>Now, theoretically, is the carrier's amplitude really
>varied by the modulating signal? Or does the output
>wave-form's amplitude vary depending on the
>modulating signal?

As mentioned above: The carrier is not varied (neither in frequency than in amplitude) by the modualting frequency. It is once used to generate the side frequencies and then not more requiered (theoretically) in spite of the demodualtion problem (see my other posting).

>This how I started to approach the issue at first, but with no luck.
>I tried hooking up a simple BJT amplifier circuit using an NPN
>transistor. I fed the modulating signal into the transistor's base and
>connected the transistor's collector to the circuit generating my
>carrier.

That's one way you can do it. A good approach for a working curcuit could be the following:

- Build a simple CW transmitter from the ARRL handbook with 2 or 3 stages (stages counted including the oscillator).
- Lead the +Vcc line of the last amplifier stage through a simple switiching (i. e.modulating) transistor that is fed (to the tranistor's base) with the audio frequency you want to modulate. Be sure to bias this transistor in an appropriate

manner. That means that you should supply a constant base current via a variable voltage divider to the base of this modulating transistor. You must in every case check the modulation with an oscilloscope.

I posted a circuit sample under

http://www.peter-rachow.de/ammodcircuit.jpg

hth

Peter
--
http://www.peter-rachow.de

2543. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 11:06:55 UTC
From: "Student, T.U.E." <YourName@student.tue.nl>
Message-ID: <a8enlj$5mk$1@news.tue.nl>
Source record: 45135
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

If you ever visit Europe there's a good alternative from PA0SSB in Holland.
He offers a nice full coverage, 100W HF kit for reasonable prices. But I
guess he won't send it to you since the shipping costs will be as much as
the price for the rig itself and he wouldn't be able to offer you after
sales service. You can see the picture of the designer and the rig itself on
the next link: http://home.pi.se/sm0fly/pa0ssb.htm
good luck 73
PA3GLZ

"Arthur Jernberg" <stubby@comcast.net> wrote in message
news:i9Aq8.398562$uv5.33509525@bin6.nnrp.aus1.giganews.com...
> Negative, you will probably need a good transciever and a linear
amplifier.
> "Melissa in Colorado" <melissa@NODARNSPAMupalliance.org> wrote in message
> news:Xns91D898EE54503melissaNN0DARNSPAMup@206.124.0.13...
> > "xpyttl" <xpyttl_nospam@earthling.net> bestowed such eternal wisdom
upon
> > us by saying from news:u9jjmb7rhoo4d3@corp.supernews.com:
> > ...
> > > If you really want to melt solder, take a peek at the stuff from
> > Elecraft,
> > > NorCal, Small Wonder Labs, OHR, Red Hot Radio, etc. etc. etc. Then
look
> > at
> > > Homebrew stuff from K8IQY, NJQRP, Harry's Homebrew Homepage, EI9GQ,
etc.
> > > etc. In fact, if you go to QRP ARCI's links page, they must have a
list
> > of
> > > 50 kit suppliers. You won't get the nice feeling of building an old
> > > Heathkit (if you can stand to put it together after seeing the price),
> > but
> > > you will get a nicer rig for a bunch less money.
> >
> > BTW, it sounds interesting, but I'm not really into QRP. Is anyone
making
> a
> > full featured all band HF transceiver kit that puts out full power? (
> like
> > 100-200 watts PEP out?)
> >
> > --
> > - Melissa

> > Somewhere in Colorado
> >
>
>

2544. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 11:15:34 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <3CAAE456.F560391B@dialpoint.net>
Source record: 45134

Funny how differant things take differant times. I ordered a 17 inch monitor a couple of weeks ago and it only took it 3 days to get here from about 250 miles. Thing about it is it went within 10 miles from the house to a place about 40 miles away to a hub then back to the local UPS depot and then to the house. I have usually had good luck with the shippers as most of the time it is a call to order on Munday morning and the item is here by Friday if the item is sent to the UPS or Fedex that day.

Lou wrote:
>
> Face it, the "Mail" SUCKS.........
>
> I had a package sent to me from New York and it took a week to the day it
> was shipped. I'm only 300 miles from the origination - in PA. Then, I
> shipped a package 2nd day "Priority" to LA area. It took 2 weeks and 2 days
> to get there. Priority - my ass. I have a package c

2545. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 12:20:19 UTC
From: Brenda Ann <brandad@kornet.net>
Message-ID: <a8er6bbuk1@news1.kornet.net>
Source record: 45136
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Since when is caring about other people instead of $$$ a bad thing?? I realize it has fallen largely out of vogue, what with the egocentric society that pervades these days. Life itself, let alone one's fellow human beings, has become virtually worthless.. a throwaway commodity, like a used razor... I don't know about you, or anyone else, but this scares me to death. I'll stick to the old ways, where people matter. If ever comes a time where money takes precedence in my life over another human being, it will be time for me to make my exit.

Take care, and stay well.

73
Brenda Ann
HL2/K7BAD

"Zoran Brlecic" <WA7AA@attbi.com> wrote in message
news:3CAA49F8.63CD01A1@attbi.com...
> Joe Mama wrote:
>
> > It's not so much that
> > people nowadays want money for their goods, but rather the outrageous
profit
> > margins that perpetually rise because of "lack of availability" and the
lust
> > for money on the part of those who hold us in virtual consumer slavery..
>
> It's called free market capitalism, where the demand regulates supply. If
there
> are a few items many people want, prices will go up. It's a beautiful
concept
> when you think about it. So simple and natural.
>
> > Example: I *used* to collect coins as a *hobby*. Why is it that when a
new
> > commemorative coin such as the Susan B. Anthony or Eisenhower dollar,
the
> > Kennedy half dollar or the new state quarters are issued, the yuppie
idiots
> > immediately run down to the banks and buy hundreds or thousands of them
to
> > stick up in a closet and sit for decades, and save *every* single one
that
> > they get in change, thus limiting the legitimate collectors of the

pleasure
> > of finding and/or affording them for their hobbies?
>
> Because they know that years later collector idiots will pay good money
for shiny
> quarters no one bothered to save when they were widely available?
>
> > The same can be held
> > true for vintage ham radio equipment, parts and accessories..
>
> The solution is simple: we have to establish a Central Committee which
will
> nationalize all the vintage ham radio equipment and which will then
redistribute
> it according to the needs of the people.
>
> > I'm from the old school when people put more value on kindness, reason
and
> > human compassion than riches, and i'm not at all impressed by what I see
> > nowadays. There are entirely too many selfish people in the world
today..
>
> Bullshit. This is nothing but geezers' cry about the good old times. It's
never
> as it used to be - it was always better when we were young, wasn't it?
Even when
> there was slavery, tyranny, plague, no elections, no electricity, no food,
no
> fire...
>
>
> 73 .... Zoran WA7AA
>

2546. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 13:13:59 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0204030513.24296dbd@posting.google.com>
Source record: 45138

[snipped]

Martin Wehner <martin@cyclotomic.com> wrote in message
news:<3CA9FEEE.FCD0F10F@cyclotomic.com>...
> JLB wrote:
> > So, he passed his license test an doesn't know the first thing about
> > how radios work? He never heard of the ARRL handbook?
>
> I am very sorry if I offended you in any way.
>

Martin,

I was not offended by what __you__ said.

My comment was directed at the __previous poster__ that suggested that
it was an April Fool's joke.

I thought the same thing when I read the problems that you were
having, and then saw that you __did__ have a ham license. It made me
wonder if maybe it was an April Fool prank.

I know it has been a long time since I took a license exam, but I
believe they still require some knowledge about how radios work, don't
they? And basic schematic reading?

Jim
N8EE

2547. Re: Help convert 14Mhz RF amp 7Mhz pse

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 13:33:57 UTC
From: Nisse <nisse@manpower.se>
Message-ID: <3CAB04C5.526180F5@manpower.se>
Source record: 45139

Supplied link not working.

Mike W wrote:
>
> Hi Folks,
> I would like to convert a 14Mhz Class C RF amp to 7Mhz
> the circuit is here..
>
> www.corn2.freeserve.co.uk\25wrfamp.gif
>
> My knowledge of RF amps is almost nil, so I know enough to know I need
> help here.
> I believe the input and interstage is broadband but the output is a
> frequency specific 'T' matching network, but I'm not sure.
> If someone could guide me on this one I'd appreciate it.
>
> thanks Mike W

2548. Chassis Punches

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 15:03:29 UTC
From: Kelven <kel6006@hotmail.com>
Message-ID: <QePq8.27710$0T6.8182277@e3500-atl1.usenetserver.com>
Source record: 45150

Anybody have a source for a set of Chassis Punchs/and kits.
This is the tools that make the holes in chassis for tube holders,
meters,etc....sockets...
Thanks Don

2549. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 15:14:04 UTC
From: kludge@panix.com
Message-ID: <a8f67s$2db$1@panix2.panix.com>
Source record: 45141
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Brenda Ann <brandad@kornet.net> wrote:
>Since when is caring about other people instead of $$$ a bad thing?? I
>realize it has fallen largely out of vogue, what with the egocentric society
>that pervades these days. Life itself, let alone one's fellow human beings,
>has become virtually worthless.. a throwaway commodity, like a used razor...
>I don't know about you, or anyone else, but this scares me to death. I'll
>stick to the old ways, where people matter. If ever comes a time where money
>takes precedence in my life over another human being, it will be time for me
>to make my exit.

Well, to be honest, most tubes are easy to get. Pretty much all the standard audio tubes are in current production, compactrons and most other TV tubes are a glut on the market, and most standard radio tubes have supply greatly exceeding demand.

The problem are some of the more obscure tubes, and sweep tubes.

And sweep tubes are a special case, and the worst possible case, and they are the problem with the FT-101. Because they were dirt cheap, designers used them (and lots of folks converted commercial gear to use them). TV set tube production was very high and there were plenty of sweep tubes out there.

Then tube TV sets stopped being made, but there were still huge numbers of sweep tubes in the warehouses.

The problem came with appliance operators who didn't know how to neutralize their finals, people who ran the finals at outrageously high levels, and the illegal CB linear crowd who often ran huge numbers of badly matched parallel tubes.

And these people collectively destroyed most of the stock of sweep tubes out there, and now they sell for outrageous amounts of money. THAT is the problem more than anything else. Tubes that should have lasted for years of operation that only lasted for hours.
--scott

--
"C'est un Nagra. C'est suisse, et tres, tres precis."

2550. Re: Unbuild Heathkit SB102 Transcievers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 15:43:55 UTC
From: Ed Juge/NM <ed_juge@zianet.com>
Message-ID: <3cab1491.0@oracle.zianet.com>
Source record: 45140
Cross-posted to: sci.electronics.design,sci.electronics.equipment,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment

Melissa...

Elecraft is about to introduce a 100-watt output amp for the K2 transceiver. It is in beta test now and I'll bet shows up for sale at Dayton. It will be built into the top so won't increase the size at all, and becomes an integral part of the radio. If you want to go back to QRP, just pull the amp and reinstall the original top which contains the battery and auto-tuner options. Takes about 3 minutes to make the change. (There will be an autotuner for the AMP as well.)

Also, bear in mind that the K2 has a receiver that will compete with the best commercial rigs available today... **WAY** beyond Heathkit's wildest dreams. The ARRL said it handles close-in QRM better than ANY receiver ever tested in their lab.

THE K2 IS NOT YOUR "TYPICAL" KIT RADIO! In A/B comparisons, I have never heard any station --under any conditions-- on my IC-756PRO that I couldn't hear at least as well on the K2, and I have been able to copy a few on the K2 that were unintelligible on the PRO. And the PRO heard a few I couldn't pull out on the FT-1000D I used to own.

The K2 feature set is outstanding and it's fun to build.

73... Ed, W5EJ

> BTW, it sounds interesting, but I'm not really into QRP. Is anyone
> making a
> full featured all band HF transceiver kit that puts out full power?
> (like 100-200 watts PEP out?)
>
> --- Melissa
> Somewhere in Colorado

2551. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 18:50:56 UTC
From: Martin Wehner <martin@cyclotomic.com>
Message-ID: <3CAB4F10.CF4AED6@cyclotomic.com>
Source record: 45142

Hello Peter-

Thanks very much for the reply.

Peter Rachow wrote:
> Among all the mixer circuits that are common the DBM ensures the
> maximum suppression of the former input signals at the mixer's

OK. So I did get the concept. Thank you for explaining it again.
I believe I used the terms amplitude modulation and SSB interchangably
and that's where my confusion stemmed from. Thanks for clarifying.

> OK, I'll look into my library. But some circuits are commented
> in German, I hope that won't confuse you. ;-)

No problem at all.
As long as it's in English, German, or Spanish I'll be able to deal with
it.
Feel free to e-mail me the schematics directly at the address below.

Thanks for the explanation regarding the differences between DSBFC and
SSBSC transmissions.
I merely used the same term (amplitude modulation) for both, and that's
why I was confused when you said that a carrier was always required.

> In AM the outcome looks like the picture I put on my web site
> (100% modulation degree). The shape you see is a result of the
> fact that 3 frequencies are present at the same time (fCarrier,
> fUSB and fLSB) and that they are shifted in phase by the audio
> freqeuency and are only 1/4 of the fCarrier voltage.
>
> In SSB the result of modulating a single af tone is only one
> constant sine wave signal. This is due to the fact, that two new
> signals are generated if we mix ONE rf sig with ONE af sig and
> that one of the resulting signals is suppressed in an SSB filter

Oh goodie! Thanks for explaining that! That's what I thought, but I
wasn't sure.
That makes a lot of sense, thank you very much!

Thanks again for your reply. If you do have time and find another
schematic or two, I'd love to take a look at it.

Martin

Martin Wehner (KG6KLF)

e-mail: <martin@cyclotomic.com>
web: http://www.cyclotomic.com/~martin

2552. Re: Q of two coils in series

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 19:42:05 UTC
From: k7itm@aol.com
Message-ID: <3200347.0204031142.26c6abf7@posting.google.com>
Source record: 45143

Paul Keinanen <keinanen@sci.fi> wrote in message
news:<n8liau0vhg3bqh94q4n6me080e2md4v8v3@4ax.com>...

> However, the Q=650 for a 1.8 mH coil at LF sounds quite optimistic.

Sounds like a loop antenna to me, maybe 2 meters on a side, square,
wound with 3.5mm diameter wire...or something close to that. It is
rather a lot of wire. But Reg's loop3 program, at least, predicts Qs
up in the 650 range for such a loop at 150kHz.

(It makes me wonder what the Q of the "helix" loading coil used at the
Jim Creek 20kHz transmitter is...)

Cheers,
Tom

2553. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 20:22:41 UTC
From: Martin Wehner <martin@cyclotomic.com>
Message-ID: <3CAB6491.BE6C5015@cyclotomic.com>
Source record: 45144

Hello Peter-

Thanks for message number two!

Peter Rachow wrote:
> See http://www.peter-rachow.de/amsignal2.jpg

Thanks a lot!

> That's one way you can do it. A good approach for a working
> curcuit could be the following:

OK, so I wasn't all that far off!
I'll go back and try that approach again.

> http://www.peter-rachow.de/ammodcircuit.jpg

Thanks for posting that schematic.

Last night I finally got around to trying the circuit I had described previously: I connected the carrier signal to the base of a NPN amplifier circuit. The modulating signal is connected to the emitter, and the output is taken at the collector. The amplifier is biased at the base with a voltage divider, and has a series network of resistors in the emitter for gain; for stability, one of the emitter resistors is shorted out at higher frequencies by use of a capacitor. The voltage at the collector is set to 1/2Vcc under DC conditions, assuming 0.5mA.

The circuit does work: I can pick up the signal with my radio.
However, the output signal does not look like I thought it is supposed to (I think). The spice simulation also shows a different output wave-form from what I am measuring with the scope.

I had totally forgotten that I have a web-cam sitting around here somewhere.
The quality is terribly (sorry), but at least I have some pictures up of what I am dealing with at least.
You can find the pictures, as well as a schematic and Spice input at:
http://www.cyclotomic.com/~martin/ammod.html

Any input would be greatly appreciated.

Thanks-

Martin

Martin Wehner (KG6KLF)

e-mail: <martin@cyclotomic.com>
web: http://www.cyclotomic.com/~martin

2554. Re: Antenna for 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 20:29:10 UTC
From: Martin Wehner <martin@cyclotomic.com>
Message-ID: <3CAB6616.F4D0EA3E@cyclotomic.com>
Source record: 45145

Hello Ryan-

Thanks for your follow-up message.

KC8PMX wrote:
> That antenna above and the ventenna are listed in the ARRL Antenna Handbook
> or the ARRL Handbook. Check them out or maybe someone else here has
> knowledge of a link to a website where you can find more. Both ARRL books
> are good reference materials for your library though.

Thanks a lot. The ventenna is not listed in the 2001 edition of the
Handbook that I have in front of me here.
Rob Crandall e-mailed me directly (thank you) with a link to a
commercial site that shows the ventenna: the link -appropriately- is
http://www.ventenna.com/index.html
I don't have the ARRL Antenna book (yet), so I cannot comment on whether
there is a reference to it in there, but I wanted to let others know of
the link in case somebody else is interested.

> No sweat.... Some others would be extremely rude, and make uncalled-for
> comments, but I rather be helpful. I never got the assistance I wanted in
> the past, so I feel complelled to help you.

Yeah, that's all right, that won't deter me :)
Thanks again for your reply and the input!

Martin

Martin Wehner (KG6KLF)

e-mail: <martin@cyclotomic.com>
web: http://www.cyclotomic.com/~martin

2555. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 21:44:56 UTC
From: Peter Rachow <peter.rachow@t-online.de>
Message-ID: <a8ftmfeca07$1@news.t-online.com>
Source record: 45146

Hi Martin,

I took a look at the pictures on your web site and the oscilloscope readings look very familar to me. They're just bringing me brack to my old radio days ;-))

One that I recognize best is entitled "Measured output (wave-form at bottom is the modulating signal)". The problem in this case is, that the modulation transistor does not perform properly. This can be due to several reasons:

The most probable in my opinion is the following: If you use the circuit that is printed as the first image of the page, I can imagine where the cause for the faulty performance lies: You put in Vmod at the emmitter of the rf transistor and bypass it with the RC-combination 0.1u/100 Ohms. That is not a good idea because the transistor can get direct current from the ground line and so bypasses the modulator transistor or whatever you have there. The waveform that I can see on the picture is not AM, it looks like some sort of incomplete superposition of two different sine waveforms.

BTW: I faced similar problems about 20 years ago, when I started to build tiny AM radio-control transmitters for the 27 MHz band that were modulated with sine waves. The modulation circuit I ended up with (because it was the most reliable and best performing one) was that, which I posted on my website. In oder to enhance the modulation quality you can also lead the power for the pre amp over the modulating transiator so that two stages are modualted. This ensuees a much more accurate modulation if the bias for the mod transistor is set properly. Sometimes I used transformers instead of a transistor but that required an audio power level in the range of the transmitter's rf output. But once this was granted, these curcuits worked well, too.

To point it out again: If want to have a proper amplitude modulation you must lead the *whole* current of at least the final stage of your transmitter thru the modulating device. It is even more recommended to co-modulate also the stage in front of the final stage. But, you should not modulate the oscillator, this might lead to unwanted FM.

In our school library we've got some of the older books dealin' with AM radio control transmitters. Unfortunately this week there is no school because I'm on holiday. If you drop me an

e-mail by the beginning of next week, I'll remember to check out
some literature on this specific topic.

hth es 73

Peter
DK7IH
--
http://www.peter-rachow.de

2556. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-03 21:53:09 UTC
From: Peter Rachow <peter.rachow@t-online.de>
Message-ID: <a8fu5f$i44$05$1@news.t-online.com>
Source record: 45147

Martin,

I took a look at the pictures on your web site and the oscilloscope readings look very familar to me. They're just bringing me back to my old radio construction days ;-))

One that I recognize best is entitled "Measured output (wave-form at bottom is the modulating signal)". The problem in this case is, that the modulation transistor does not perform properly. Or, to say it more claerly: It does not modulate the rf stage at all. This can be due to several reasons:

The most probable cause in my opinion is the following: If you use the circuit that is printed as the first image of the page, I can
imagine where the cause for the faulty performance lies: You put in Vmod to the emmitter of the rf transistor and bypass it with the RC-combination 0.1u/100 Ohms. That is not a good idea because the transistor can get direct current from the ground line and so bypasses the modulator transistor or whatever you have there. The waveform that I can see on the picture is not AM, it looks like some sort of incomplete superposition of two different sine waveforms.

BTW: I faced similar problems about 20 years ago, when I started to build tiny AM radio-control transmitters for the 27 MHz band that were modulated with sine waves. The modulation circuit I ended up with (because it was the most reliable and best performing one) was that, which I posted on my website. In oder to enhance the modulation quality you can also lead the power for the pre amp over the modulating transiator so that two stages are modulated. This ensures a much more accurate modulation provided the bias for the mod transistor is set properly.

Sometimes I used transformers instead of a transistor but that required an audio power level in the range of the transmitter's rf output. But once this was granted, these curcuits worked well, too.

To point it out again: If want to have a proper amplitude modulation you must lead the *complete* current of at least the final stage of your transmitter thru the modulating device. It is even more recommended to co-modulate also the stage in front of the final stage. But, you should not modulate the oscillator, this might lead to unwanted FM.

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with AM radio control transmitters. Unfortunately ;-) this week
there is no school because I'm on holiday. If you drop me an
e-mail by the beginning of next week, I'll remember to check out
some literature on this specific topic.

hth es 73

Peter
DK7IH
--
http://www.peter-rachow.de

2557. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 00:14:28 UTC
From: JD <dyson@jdyson.com>
Message-ID: <EKMq8.1478$Mx3.283735@news1.iquest.net>
Source record: 45148

"Mr G H Ireland" <igor@argonet.co.uk> wrote in message
news:na.b524564b21.a70320igor@argonet.co.uk...
>
> You say," With some help from sci.electronics.basics, I believe I finally
> got rid of the notion that in AM, the carrier's amplitude is changed over
> time."
>
> But it is! Let your DSB amplitude modulation frequency be 1Hz.
> Your carrier will vary from 0v.pk.-pk. to 2 times unmodulated carrier
> voltage. At the same time, this is also an unmodulated carrier, accompanied
> by two side-bands at the carrier frequency plus 1Hz and at the carrier
> frequency minus 1Hz.
>
> The three frequencies reinforce and cancel at periods of one second.
>
> Both ways of looking at the thing are equally valid. They are just two ways
> of expressing the same thing. If you displayed it on an oscillograph with a
> slow time-base, you would see the carrier wave as a fuzzy area increasing
> and decreasing at 1Hz. If you had a sufficiently selective receiver you
> would detect three frequencies at Fc, Fc+1 and Fc-1.
>
I want to help by re-enforcing the notion that the 'carrier' with 'sidebands'
concept is a FREQUENCY or FOURIER domain concept. The notion that the
carrier is modulated by varying it's amplitude is a TIME domain concept. It
is easy to be confused (for a beginner) to mix the TIME and FREQUENCY
metaphors.

John

2558. FS: GENERAL ELECTRIC Power Transformer for 200-300 Watt Solid State Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 00:21:42 UTC
From: mnowlen@yahoo.com
Message-ID: <3cab9d85.1638717591@news.va.comcast.giganews.com>
Source record: 45149
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.components,rec.audio.marketplace

GENERAL ELECTRIC TF4RX02NA Power Transformer

Has four seperate 32 volt @ 4 Amp windings. Connect in series for 128
Volts or +/- 64 Volts Center Tapped. Primary tapped for 109,
115,120,126, and 132 Volts. Potted in military style case with
terminals. Weight: 20 Lbs. Great for 200-300 Watt Solid State Amp.

Picture at:
http://mywebpages.comcast.net/mnowlen/ge-power-trans.jpg

Very Good Condition, Tested and working.
Two available.
$50 each + Shipping
Send zip code for estimate

Please reply via e-mail or telephone

Thanks for reading.

Mike Nowlen
mnowlen@yahoo.com
(703) 716-1363

2559. Re: Chassis Punches

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 03:16:50 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <uanhdmnobgsqe0@corp.supernews.com>
Source record: 45151

> Anybody have a source for a set of Chassis Punchs/and kits.
> This is the tools that make the holes in chassis for tube holders,
> meters,etc....sockets...
> Thanks Don
>
Mouser Electronics. Also electrical suppliers stock the sizes that
electricians use.

2560. Re: Chassis Punches

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 03:30:31 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <uani6vlodact8b@corp.supernews.com>
Source record: 45152

Green Lee
"Kelven" <kel6006@hotmail.com> wrote in message
news:QePq8.27710$0T6.8182277@e3500-atl1.usenetserver.com...
> Anybody have a source for a set of Chassis Punchs/and kits.
> This is the tools that make the holes in chassis for tube holders,
> meters,etc....sockets...
> Thanks Don
>
>
>

2561. 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 04:11:51 UTC
From: smitjs@mweb.co.za
Message-ID: <3cabd276.1166477@news.mweb.co.za>
Source record: 45153
Cross-posted to: sci.electronics.misc,rec.radio.amateur.homebrew

Hi,
I can obtain 433Mhz TX/RX modules specd as:
TX RF out 10mw max.
RX sensitivity -100 dbm
See http://www.aurel.it, 400Mhz audio transmitter/receiver modules.
I would like to know what range I could expect of this pair.
Furthermore, both antennas need to be 50 ohm.
What kind would this be, and what would the required length be?
My application calls for a minimum of 100 meters distance with a
simple wire antenna.
Any help much appreciated.
Thank you
Johan Smit

2562. Re: Antenna for 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 04:45:20 UTC
From: KC8PMX <kc8pmx@NOSPAMdiamondcs.net>
Message-ID: <a8hh1j21vu1@enews1.newsguy.com>
Source record: 45159

Enjoy and keep us updated on your sucesses. BTW.... those manuals mentioned
in the last posting are good for your personal reference library and can
also be found alot of times at hamfests etc... for a great price. The info
for the most part stays the same....

--
Ryan, KC8PMX
FF/MFR

www.qsl.net/w8kea

REMOVE "NOSPAM" in email address to reply.

"Martin Wehner" <martin@cyclotomic.com> wrote in message
news:3CAB6616.F4D0EA3E@cyclotomic.com...
> Hello Ryan-
>
> Thanks for your follow-up message.
>
> KC8PMX wrote:
> > That antenna above and the ventenna are listed in the ARRL Antenna
Handbook
> > or the ARRL Handbook. Check them out or maybe someone else here has
> > knowledge of a link to a website where you can find more. Both ARRL
books
> > are good reference materials for your library though.
>
> Thanks a lot. The ventenna is not listed in the 2001 edition of the
> Handbook that I have in front of me here.
> Rob Crandall e-mailed me directly (thank you) with a link to a
> commercial site that shows the ventenna: the link -appropriately- is
> http://www.ventenna.com/index.html
> I don't have the ARRL Antenna book (yet), so I cannot comment on whether
> there is a reference to it in there, but I wanted to let others know of
> the link in case somebody else is interested.
>
> > No sweat.... Some others would be extremely rude, and make uncalled-for
> > comments, but I rather be helpful. I never got the assistance I wanted
in
> > the past, so I feel complelled to help you.
>
> Yeah, that's all right, that won't deter me :)
> Thanks again for your reply and the input!
>
> Martin

>
> --
> Martin Wehner (KG6KLF)
>
> e-mail: <martin@cyclotomic.com>
> web: http://www.cyclotomic.com/~martin
> --

2563. Re: 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 04:54:41 UTC
From: Mark <mark@lineisp.com>
Message-ID: <p2Rq8.2888$8q1.424059@news2-win.server.ntlworld.com>
Source record: 45154
Cross-posted to: sci.electronics.misc,rec.radio.amateur.homebrew

"Johan Smit" <smitjs@mweb.co.za> wrote in message
news:3cabd276.1166477@news.mweb.co.za...
> Hi,
> I can obtain 433Mhz TX/RX modules specd as:
> TX RF out 10mw max.
> RX sensitivity -100 dbm
> See http://www.aurel.it, 400Mhz audio transmitter/receiver modules.
> I would like to know what range I could expect of this pair.
> Furthermore, both antennas need to be 50 ohm.
> What kind would this be, and what would the required length be?
> My application calls for a minimum of 100 meters distance with a
> simple wire antenna.
> Any help much appreciated.
> Thank you
> Johan Smit

My initial thoughts are the 10mW would handle the job - but only just - however it will depend on where they are being used and whether the units are AM, FM or "QM" - sort of a mix of the two. If the unit is FM or QM, then if the units have little between them, I think you will find reasonable results. However for AM operation, you will almost certainly find operation at 100M difficult if not unusuable.

If the modules (FM/QM) are mounted 100m apart in an open field you should find things work spinningly well - all things being roughly equal - in practice, this is rarely the real-world application.

If the tx is housed in a basement, while the receiver is in another basement 100M down the road, then I guess you'd be lucky to get through with over 10 times the power.

Also, when you say "calls for a minimum of 100 meters....", do you mean this is the minimum acceptable performance - or do you mean in some applications it will need to work at distances greater than the minimum? If the latter, then what is the *maximum* range these units will have to contend with?

Lastly, I guess the amount of electrical / electronic noise is important too. If you operate these units and someone else has something similar operating nearby, you may have interference. Likewise if someone in the area has an electrically noisy photocopier etc, this may also give the receiver some unwelcome fun to handle - espceically if the signal is only just getting through in the first place. Is this acceptable?

My experience with RF is VERY limited - however I have played around with 433 and 418 modules a little - and (IME) the range can vary HUGELY depending

on the factors mentioned above. Some of the more learned posters in the ng
may be able to give you much more useful information. However, whoever tries
to help, it would be useful to know the following please.

Modulation type (AM/FM/QM) (perhaps even part numbers?)
Type of use: / continuous / pulsed / encoded data / voice / etc
Positioning (outside/inside/underground/mobile etc)
Is a "noisy" but readable signal acceptable or not.
Is loss of signal a MAJOR issue if only occasional.
Is performance or price the biggest issue - if you HAD to choose?
Is 433 @ 10mw the only acceptable solution?
Are you adamant that the RX must also use a whip?

Mark

2564. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 06:22:27 UTC
From: Joe Mama <joemama@prozac.net>
Message-ID: <cnqnaukist0fn1qb7dv74jskelb66q37p4@4ax.com>
Source record: 45158
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Tue, 02 Apr 2002 16:55:15 -0500, Grey Fox <parrfoo@sympatico.ca> wrote:

> Good thoughts, Joe. I'm with you on your comments. I remember the times we
> left the front door open, 'cos we couldn't find the key and it didn't matter
> Regards
> Old Grey Fox

Believe it or not, there are still places left in this world where people leave their front doors unlocked, even when no one is at home. I used to work in one of these areas, which is a small semi-rural community where everyone knows everyone and trust runs high among the locals. When people made appointments for me to come over to their houses and they couldn't be home, they would just say "the door is unlocked. He knows where and what needs to be done. There's a beer/soda pop in the refrigerator. Just tell him not to let the dog/cat out and pull the door shut when he leaves..

I knew a lot of the people on a first name basis, the dog in the backyard, seen people's hidden contraband, marijuana plants, etc, and virtually had free run of the whole doggoned area, pasturage, wooded areas, etc without having to worry about getting shot at for wandering into the wrong place..

Because my boss was a jerk, I left that job for another one "over the hill" in "civilisation" which offered a very substantial increase in pay, but I still miss the people and the laid back and virtually stress free work atmosphere which I had held onto for five years because in many ways it was worth more to me than all the money in the world..

-jm

1968 XLCH under construction
1984 XR-1000
1987 Jaguar XJ6 Vanden Plas

To return mail no spam, change the reply address to:

"joemama at rarebird dot net"

2565. Re: Problem w 17m HB SSB TX

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 06:40:06 UTC
From: ".Bill M" <TheRealExray@netscape.net>
Message-ID: <3CABF546.9FF7F9E1@netscape.net>
Source record: 45165

Bill Meara wrote:
Could it be
> that as the temp rises, the gain of the device increases making spurs
> and parasitics more likely?

Yep. Sometimes simply throwing in a low resistance (5 or 10 ohm) carbon film resistor will upset whatever tendency for oscillation you might have. The film resistors have a bit of inductance, plus the resistance, so its a cheap parasitic choke that has little adverse affect on the operation of the ckt.
-Bill WX4A

2566. Re: Problem w 17m HB SSB TX

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 06:44:48 UTC
From: Peter Rachow <peter.rachow@t-online.de>
Message-ID: <a8gta8$8nf$05$1@news.t-online.com>
Source record: 45156

Bill,

[SSB-Transmitter]

Is the TX constructed in that way that you use

- a TX mixer
- 3 pre driver stages (two 2n2222s and a MPF102)
- 1 driver stage
- 1 final stage?

If so, my first imagination is that your transmitter is working unstable and produces parasetic signals anywhere in the LF or VHF bands....

BTW: What does "Manhatten Style" mean?

>Any ideas on what is happening and how I
>could stop it?

Not yet ;-))

73

Peter
DK7IH
--
http://www.peter-rachow.de

2567. Re: Problem w 17m HB SSB TX

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 07:03:40 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CABFACC.6639@pop.removethistomailme.net>
Source record: 45157

Bill Meara wrote:
>
> I've tried increasing the size of the heat sinks. This helped a bit.
> I suppose I could put a little CPU fan in there to keep the temp down,
> but I'm thinking that there might be a more elegant way to solve the
> problem. Also, I'd like to understand what is going on. Could it be
> that as the temp rises, the gain of the device increases making spurs
> and parasitics more likely?

Yep. Beta rises with temperature. This is what causes classical
thermal runaway in transistors (both bipolars and vertical power FETs),
and why amplifiers sometimes have to be temperature-compensated to keep
their idling current down to reasonable levels.

> Any ideas on what is happening and how I could stop it?

Just as a first guess, how about ferrite beads on the base and/or
emitter leads?

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2568. Problem w 17m HB SSB TX

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 07:25:55 UTC
From: n2cqr@clix.pt
Message-ID: <3cabffda.2732497@news.clix.pt>
Source record: 45155

I've built a 17 meter SSB transmitter. I borrowed bits and pieces of circuits from various designers. The core of the sideband generator comes from a G3YCC article in SPRAT 48. Of course there are also elements from W1FB in there. The rig is built Manhattan style on a number of separate PC boards. The boards are mounted on the chassis of an old DX-40. The filter and the carrier oscillator rock come from a Swan 240 that got too clse to a lightning strike in the Dominican Republic. So the rig has some character!

I found that the hardest part of getting this one to work was the RF amplifier. I had to try several circuits before I found one that I could get stable. I now have two MRF 476s in parallel driven by a 2N3866. There are two 2n2222s and a MPF102 in the chain before the driver. The thing puts out about 5 watts PEP. Everyone says it sounds good.

Here's my problem: As the transistors start to get warm, I can see on my SWR bridge that there is some sort of low level signal in there -- it looks like just a few milliwatts, but it doesn't belong there. It persists even when I shut down the carrier oscillator. It is not at 18 Mhz. It shows a very high SWR into my 17 meter dipole. It is only there when the temp of the final goes up. I'm not sure what the freq of this spur is.

I've tried increasing the size of the heat sinks. This helped a bit. I suppose I could put a little CPU fan in there to keep the temp down, but I'm thinking that there might be a more elegant way to solve the problem. Also, I'd like to understand what is going on. Could it be that as the temp rises, the gain of the device increases making spurs and parasitics more likely?

Any ideas on what is happening and how I could stop it?

Thanks,

Bill CU2JL N2CQR
http://planeta.clix.pt/n2cqr
73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 15.7 W
http://planeta.clix.pt/n2cqr

2569. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 07:31:27 UTC
From: ".Bill M" <TheRealExray@netscape.net>
Message-ID: <3CAC014F.F7D27A5A@netscape.net>
Source record: 45166
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Joe Mama wrote:

>
> Because my boss was a jerk, I left that job for another one "over the hill"
> in "civilisation" which offered a very substantial increase in pay, but I
> still miss the people and the laid back and virtually stress free work
> atmosphere which I had held onto for five years because in many ways it was
> worth more to me than all the money in the world..

Maybe that exists somewhere now, but the current risk is that the same openness will have you sitting behind bars when some doper whines to the police that you stole his dope. Did I say risk? That was a risk 20 years ago...its almost a norm these days that a serviceman left in the house has stolen something.
I hitchhiked the whole country in those days...I wouldn't dare hit a highway now. Things have indeed changed and thats a sad comment on our society. Its a great memory, tho.

-Bill

2570. Re: 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 13:26:42 UTC
From: budgie <budgie@nowhere.cantech.net.au>
Message-ID: <3cac5404.4546429@news.cantech.net.au>
Source record: 45161
Cross-posted to: sci.electronics.misc,rec.radio.amateur.homebrew

On Thu, 04 Apr 2002 04:11:51 GMT, smitjs@mweb.co.za (Johan Smit)
wrote:

>Hi,
>I can obtain 433Mhz TX/RX modules specd as:
>TX RF out 10mw max.
>RX sensitivity -100 dbm
>See http://www.aurel.it, 400Mhz audio transmitter/receiver modules.
>I would like to know what range I could expect of this pair.
>Furthermore, both antennas need to be 50 ohm.
>What kind would this be, and what would the required length be?
>My application calls for a minimum of 100 meters distance with a
>simple wire antenna.
>Any help much appreciated.

You can accommodate 110dB nett path loss, from your +10dBm Tx to your
-100dBm Rx.

Free space pathloss at 433MHz over 100m is 121.2dB.

You will need to pick up that extra 11dB plus an allowance for cable
loss and path absortion by stray objects.

In simple terms, not practical unless you plan on high gain antennae
at BOTH e nds of the path.

2571. Wideband amp article now scanned

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 13:31:59 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <3CAC5544.BDB890E4@flash.net>
Source record: 45160

Hi,
A week or so ago I posted a review of an article from February 1989 RF Design by Victor Koren, "A New Negative Feedback Amplifier", where I built a breadboard of the amp and tested it.
I now have a scanned copy of that article, in .pdf format (courtesy of Frank Gentges K0BRA), and can send that, if you are unable to find that article. Note it's about 200kb in size.
Steve AA7U

2572. Re: Problem w 17m HB SSB TX

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 14:04:13 UTC
From: Woody <woody.white@att.net>
Message-ID: <3CAC5E32.6742DB5E@att.net>
Source record: 45162

Hi Bill,

Agree with previous observations.
Sometimes a (relatively) low value resistor with short to *no* leads from bases to ground can help. the tradeoff is that the bias circuit will need to supply more current and the effective gain of the stage is reduced. Another possible help is a "lossy inductor" in collector supply. ...Several turns on a FT43 core shunted by a 5-10 ohm resistor - like the parasitic suppresssor in a tube amp. At leas it is low level. I had some pop on at near full output (not used on the air!).
Woody

Bill Meara wrote:
>
> I've built a 17 meter SSB transmitter. <SNIP>

--
My website: http://woody.white.home.att.net/
WB4QXE - Homebrew Ham/Electronics Projects &
eclectic Scanning Electron Microscope Images

2573. Re: Wideband amp article now scanned

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 15:05:30 UTC
From: Jeroen Belleman <Jeroen.Belleman@cern.ch>
Message-ID: <3CAC6BBA.A28B1A44@cern.ch>
Source record: 45164

Steve Ratzlaff wrote:
> A week or so ago I posted a review of an article from February 1989 RF
> Design by Victor Koren[...]
> I now have a scanned copy of that article, in .pdf format (courtesy of
> Frank Gentges K0BRA), and can send that [...]

Can't you put it on a web site and post the URL?

Jeroen

2574. Mark Stevenson

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 15:05:52 UTC
From: Walter Treftz <penguino@atlantic.net>
Message-ID: <3CAC6BD0.563B6002@atlantic.net>
Source record: 45163

GM Mark - Can't find an email address for you. Your check arrived
yesterday and this morning
packed the 8122. Will mail either today (if I go to town - 20 mi) or at
the latest tomorrow on my
way to St.Petersburg. Guess you can expect it some time later next week.
This tube came out of
an estate that our "widow's committee" is helping with. Forget if the
deal we struck included
postage or not but it probably won't be enough to sweat so don't worry
about it. Plan to
insure it so let me know when you get it so can trash the paperwork. You
can
get in touch with me directly at --- penguino@atlantic.net --- or the
committee
at --- hvalver@hotmail.com. Like the old hooker said
"its been a business doing pleasure with you"
73 Walt (N4GL)

2575. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 16:43:13 UTC
From: 4q <nospam@nospam-tek.com>
Message-ID: <a8hvg90r8p@enews3.newsguy.com>
Source record: 45167

"JLB" <jim.bolinger@lintek.aeroflex.com> wrote in message
news:8d5ec8a2.0204030513.24296dbd@posting.google.com...
> [snipped]
>
> Martin Wehner <martin@cyclotomic.com> wrote in message
news:<3CA9FEEE.FCD0F10F@cyclotomic.com>...
> > JLB wrote:
> > > So, he passed his license test an doesn't know the first thing about
> > > how radios work? He never heard of the ARRL handbook?
> >
> > I am very sorry if I offended you in any way.
> >
>
> Martin,
>
> I was not offended by what __you__ said.
>
> My comment was directed at the __previous poster__ that suggested that
> it was an April Fool's joke.
>
> I thought the same thing when I read the problems that you were
> having, and then saw that you __did__ have a ham license. It made me
> wonder if maybe it was an April Fool prank.
>
> I know it has been a long time since I took a license exam, but I
> believe they still require some knowledge about how radios work, don't
> they? And basic schematic reading?
>
> Jim
> N8EE

Hi Jim,

I just took my test about two years ago for novice. Yes you do need some basic knowledge but not much. Block diagram stuff for the radio part and the ability to distinguish between cap, resister, transistor, and inductor schematic notation is about it. The rest of the test is on rules, safety, band allocation and other such things. From what I've seen of the General and even Advanced question pool the actual technical side doesn't get much tougher than that need for a novice or Tech license.

That aside I can totally identify with this fellow. I have a masters in physics and I've been designing computers for 12 years now, I'm no dummy. But when I first started learning about radios I had to learn out of ARRL books and off the internet and I am amazed at how much information I thought

I learned only to have to relearn it when I realized I had misinterpreted the information. When you don't have an Elmer to answer questions, it's tough to assimilate that much new information and understand it all.

But this guy is doing the right thing, he is building the circuits and scoping them out and getting his hands dirty! We could use more hams like him. It is what I did and now I'm on the air with an HB 100w tube CW transmitter and an 8 tube HB Super heterodyne receiver that I designed and built myself. I laugh now at some of the notions that I formed when I first started but I got better.

Rick KC0GIX

2576. Re: Chassis Punches

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 17:03:21 UTC
From: "Eike Lantzsch, ZP6CGE" <eikelan@gmx.net>
Message-ID: <slrnaap1ql.62j.eikelan@ID-77364.user.dfncis.de>
Source record: 45172

Henry Kolesnik wrote:
> Green Lee
> "Kelven" <kel6006@hotmail.com> wrote in message
> news:QePq8.27710$0T6.8182277@e3500-atl1.usenetserver.com...
> > Anybody have a source for a set of Chassis Punchs/and kits.
> > This is the tools that make the holes in chassis for tube holders,
> > meters,etc....sockets...
> > Thanks Don
> >
> >
> >
>
>
Indeed -
Greenlee are the best - especially the "slug buster" kind.
Grainger has them and they supply spareparts too.
BUT if you do few jobs it might not be worth to spend the money.
You might get some bargain chinese punches. Mine are older
than 20 years and still do a good job.
Of course I wouldn't trust them for anything which earns the
butter on my bread.
Even Greenlees have to be handled with care, however. Especially
the small sizes. But you know this already...
You might also consider to get some step drills. Two
sizes might be sufficient for all your jobs. For AL they provide
faster working than punches. OK with steel too but slower.
Step drills or "Drill-Tree" mfg: VERMONT AMERICAN
goes from 1/8" to 1/2" and 1/4" to 3/4". JENSEN, Phoenix has them
but there are cheaper sources.
Then there are UNIBIT step drills. 4 sizes. TIME MOTION TOOLS.
I guess that Northern Tools or Lowe's has them too.

Regards, Ike

2577. Re: 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 19:18:37 UTC
From: john graesser <graesser@tca.net>
Message-ID: <uap9l7id2niq9f@corp.supernews.com>
Source record: 45168
Cross-posted to: sci.electronics.misc,rec.radio.amateur.homebrew

Did I miss the audio modules, all I saw were data modules, with the handheld versions looking a lot like car alarm remote controls, or remote car door unlock controls.
thanks, John.
KC5DWD

"Johan Smit" <smitjs@mweb.co.za> wrote in message news:3cabd276.1166477@news.mweb.co.za...
> Hi,
> I can obtain 433Mhz TX/RX modules specd as:
> TX RF out 10mw max.
> RX sensitivity -100 dbm
> See http://www.aurel.it, 400Mhz audio transmitter/receiver modules.
> I would like to know what range I could expect of this pair.
> Furthermore, both antennas need to be 50 ohm.
> What kind would this be, and what would the required length be?
> My application calls for a minimum of 100 meters distance with a
> simple wire antenna.
> Any help much appreciated.
> Thank you
> Johan Smit

2578. Re: 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 19:30:23 UTC
From: troglodite@aol.com
Message-ID: <20020404143023.07843.00002795@mb-mv.aol.com>
Source record: 45169

>Out of pure curiosity, and ignoring the law, can you amplify the
>output of these? They're the 2-wire things that look like capacitors
>right? Like, coupling via a capacitor from one leg to a transistor
>amp, would that work?

If you're going to do this, please kindly use the 418mHz modules, not the
433mHz ones which are right smack in the middle of the 70cm Amateur Radio band.

2579. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 19:39:47 UTC
From: troglodite@aol.com
Message-ID: <20020404143947.07843.00002801@mb-mv.aol.com>
Source record: 45170

>It is what I did and now I'm on the air with an HB 100w tube CW
>transmitter and an 8 tube HB Super heterodyne receiver that I designed and
>built myself.

>Rick KC0GIX

Rick,

Congratulations. It's a great feeling isn't it? All my stuff was homebrew for many years, and some of it still is. In the beginning, I built it because it was all I could afford. But I found out it was so much fun building and tinkering, I continued long after I could afford to buy commercial gear.

I still run an all vacuum-tube HF station. Running the transmitter is like driving a steam locomotive - lots of stuff to keep adjusted and if you don't pay close attention, BOOM. Single knob tuning? Bah! One of my old transmitters used to have nine circuits to tune between the VFO and the antenna - that was fun!

Doug Moore KB9TMY (Formerly K6HWY)

2580. Re: Chassis Punches

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 20:03:54 UTC
From: Steve Robertson <ke4oh@yahoo.com>
Message-ID: <3CACB1AA.BB49DE17@yahoo.com>
Source record: 45171

Hi Don,

Try http://www.triodeelectronics.com Ned, the guy that runs the place, has a whole set of 5 punches that will work dandy for most tube sockets, etc. The set is priced about the same as a single Greenlee punch. It's not as high quality as a Greenlee, but will do the job. The set doesn't go large enough for most meter movements I've seen. But it will go large enough for octal sockets and the like.

Ned's one of the good guys. Caters mostly to the tube DIY audio and guitar amp crowd, so he's got lots of tubes and other parts you might need. Very little SS stuff, though.

Best regards,

Steve Robertson

Kelven wrote:

> Anybody have a source for a set of Chassis Punchs/and kits.
> This is the tools that make the holes in chassis for tube holders,
> meters,etc....sockets...
> Thanks Don

2581. Re: PSU for PC from 12v car battery??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-04 21:40:19 UTC
From: Chris <chris@ilson.co.uk>
Message-ID: <1017956380.32035.0@iapetus.uk.clara.net>
Source record: 45173

Gentlemen,

Thanks to you all for taking the time and trouble to respond to my posting......

I have learned more in the the last 2 days, reading and researching the info. from your links etc. than I have in the last 6 weeks sinve I had the mad idea that I wanted to instal a PC in the car.

It is a real pleasure to be in touch with people like yourselves, who are not only knowledgeable, but also willing to share your knowledge with the likes of myself.

Thanks once again to you all, keep up the good work. My project will take a giant leapforward now thanks to your help.

Chris G6KBC

2582. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 00:19:39 UTC
From: Martin Wehner <martin@cyclotomic.com>
Message-ID: <3CACED9B.D5B3D87A@cyclotomic.com>
Source record: 45174

Hello Rick-

Thanks for the encouraging words. It's good to know that I am not the only one who has trouble with these things. I have a BS in EE, but find that I learned very little of practical value during my college education. That's one of the reasons why I got interested in Ham radio in the first place, actually.
I am now planning on getting my masters in EE as well, to hopefully fill in some of the gaps that I obviously have in my knowledge.
I find that analog electronics are just not being taught very much anymore. I learned plenty about digital electronics and have designed and implemented quite a few projects using micro-controllers, but until I really started building analog circuits, I didn't know anything about simple things like transistors beyond the mathematical equations that were drilled into us.

Thanks again for your post and congratulations on building your radios! Hopefully I'll be able to join you on the air with my own home-built equipment soon!
(I have the General class book sitting on my night-stand and am studying for that test.)

Martin

Martin Wehner (KG6KLF)

e-mail: <martin@cyclotomic.com>
web: http://www.cyclotomic.com/~martin

2583. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 00:20:43 UTC
From: Zoran Brlecic <WA7AA@attbi.com>
Message-ID: <3CACEDD3.31A3CA1B@attbi.com>
Source record: 45176
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Joe Mama wrote:

> I'm only fifty four, so I don't remember the bullshit examples that you
> cited, but you're probably some young punk, dumb asshole or both who has no
> respect or consideration for anything but himself and probably doesn't even
> know what it was like when I grew up and doesn't care because of your self
> centered attitude and government-media brainwashing that tells you what to
> do, how to do it, when to take your Prozac and what to think cuz you lack
> the mental capacity to make your own decisions..
>
> You make me wanna puke..

Gee, what happened? I thought you were from the "old school that put more value on kindness". Turns out you are just another baby-boomer, the generation that is the epitome of self-interest, greed and reckless spending in both private lives and in the government affairs. You people lived through the best of times, racked up a cozy lifestyle, put the future generations in enormous debt, and now dish out moral lectures while continuing to bankrupt Social Security and Medicare.

73 .... Zoran WA7AA

2584. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 00:26:20 UTC
From: Martin Wehner <martin@cyclotomic.com>
Message-ID: <3CACEF2C.C03EE3AA@cyclotomic.com>
Source record: 45175

Hello Peter-

Thanks for looking at those pictures I posted and for the feedback.

Peter Rachow wrote:
> One that I recognize best is entitled "Measured output
> (wave-form at bottom is the modulating signal)". The problem in
> this case is, that the modulation transistor does not perform
> properly. Or, to say it more claerly: It does not modulate the
> rf stage at all. This can be due to several reasons:

:)
Well, that confirms my suspicions!
Thanks for letting my down gently, though :)

> in Vmod to the emmitter of the rf transistor and bypass it with
> the RC-combination 0.1u/100 Ohms. That is not a good idea
> because the transistor can get direct current from the ground
> line and so bypasses the modulator transistor or whatever you

Yes, it's a NPN BJT (I use a model for a Q2N2222)

> have there. The waveform that I can see on the picture is not
> AM, it looks like some sort of incomplete superposition of two
> different sine waveforms.

OK. The reason that resistor with bypass cap is there is to stabilize
the quiescent current, and give the circuit a bit more gain at higher
frequencies.
I can get rid of that resistor, though, and try it again.
If I get around to it tonight, I'll post new pics on my site.

What's surprising to me is that the Spice output seems to show something
like AM modulation, right?

> To point it out again: If want to have a proper amplitude
> modulation you must lead the *complete* current of at least the
> final stage of your transmitter thru the modulating device. It
> is even more recommended to co-modulate also the stage in front
> of the final stage. But, you should not modulate the oscillator,
> this might lead to unwanted FM.

I guess I don't quite understand what you mean by that: what do you mean
by "lead the complete current [...] through the modulating device"?
Could you explain that more in detail, please?

> In our school library we've got some of the older books dealin'
> with AM radio control transmitters. Unfortunately ;-) this week

That'd be great, but I don't want you to go to more trouble than you already have. You've already spent so much time helping me, I don't even know where to begin thanking you.

I'll post any new results to my web-site at the same location as before. Thanks again for your help!

Martin

Martin Wehner (KG6KLF)

e-mail: <martin@cyclotomic.com>
web: http://www.cyclotomic.com/~martin

2585. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 00:36:33 UTC
From: Gary Glaenzer <nobulltrans@mchsi.com>
Message-ID: <lk6r8.169982$ZR2.84796@rwcrnsc52.ops.asp.att.net>
Source record: 45177

"Martin Wehner" <martin@cyclotomic.com> wrote in message
news:3CACED9B.D5B3D87A@cyclotomic.com...

> Thanks for the encouraging words. It's good to know that I am not the
> only one who has trouble with these things. I have a BS in EE, but find
> that I learned very little of practical value during my college
> education. That's one of the reasons why I got interested in Ham radio
> in the first place, actually.
> I am now planning on getting my masters in EE as well, to hopefully fill
> in some of the gaps that I obviously have in my knowledge.
> I find that analog electronics are just not being taught very much
> anymore. I learned plenty about digital electronics and have designed
> and implemented quite a few projects using micro-controllers, but until
> I really started building analog circuits, I didn't know anything about
> simple things like transistors beyond the mathematical equations that
> were drilled into us.

Martin;

Well, hell, man, next time try not to post something like that on April
first, OK?

When I read that bit about

> With some help from sci.electronics.basics, I believe I finally got rid
> of the notion that in AM, the carrier's amplitude is changed over time.

it conviced me that this had to be a joke post.

Glad you got the good advice and have it figured out now.

Regards,

G

2586. Re: Wideband amp article now scanned

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 03:30:13 UTC
From: whagen6@cs.com
Message-ID: <20020404223013.11150.00002163@mb-ca.news.cs.com>
Source record: 45178

I would like a copy.

2587. Looking for Three 1/4" flexible shaft couplers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 03:46:29 UTC
From: RalphE <k4ffa@comcast.net>
Message-ID: <p69r8.233242$Gf.21520927@bin2.nnrp.aus1.giganews.com>
Source record: 45179

I am building an HF Amplifier and I am in need of Three , I am building an HF Amplifier and I am in need of Three 1/4" flexible shaft couplers for my capacitors and roller connections. These are the couplers that have a 1/4" collar on each side with a ceramic circle center to isolate the conductivity of the shaft.

I have searched the web and every hamfest that I have been to since January and have not found any as of yet. I would appreciate it very much if any one can help me.

Please reply to me direct. kb4i@comcast.net

Please state price and condition.

Thanks,

Phillip Johnson KB4I
Fairview, Tn

2588. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 03:50:30 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CAD1F22.1E41@pop.removethistomailme.net>
Source record: 45180
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Miles wrote:
>
> ... Once the boards are ready, it'll be trivial for anyone to
> build a digitally-tunable octave-band source for any range of
> frequencies between 100 MHz and 3 GHz. That'll definitely open up some
> interesting RF projects to people who previously lacked the inclination
> toward the detail work. Hobbyists can stop goofing around with those
> CATV tuner hacks and build themselves a REAL spectrum analyzer, for
> instance. :)
>

The initial round of PC boards is back and as usual Richard Hosking (and
his board house) have done a great job. Pics at:

http://209.95.122.40/jm/synth2.jpg
http://209.95.122.40/jm/synth.jpg

The synth is up and running fine on this PCB, and once we make a few
minor tweaks (like simplifying the DDS power supply regulator circuit
and substituting an improved part for the ERA-5 MMIC), the boards should
be ready for purchase via PayPal from Richard within a few weeks. Cost
should be in the neighborhood of $20-$25 per board, similar to his
AD9854-only boards.

Watch this space...

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2589. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 04:02:59 UTC
From: Gary Glaenzer <nobulltrans@mchsi.com>
Message-ID: <Tl9r8.216110$702.34248@sccrnsc02>
Source record: 45181
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

fine looking work, John

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message
news:3CAD1F22.1E41@pop.removethistomailme.net...
> John Miles wrote:
> >
> > ... Once the boards are ready, it'll be trivial for anyone to
> > build a digitally-tunable octave-band source for any range of
> > frequencies between 100 MHz and 3 GHz. That'll definitely open up some
> > interesting RF projects to people who previously lacked the inclination
> > toward the detail work. Hobbyists can stop goofing around with those
> > CATV tuner hacks and build themselves a REAL spectrum analyzer, for
> > instance. :)
> >
>
> The initial round of PC boards is back and as usual Richard Hosking (and
> his board house) have done a great job. Pics at:
>
> http://209.95.122.40/jm/synth2.jpg
> http://209.95.122.40/jm/synth.jpg
>
> The synth is up and running fine on this PCB, and once we make a few
> minor tweaks (like simplifying the DDS power supply regulator circuit
> and substituting an improved part for the ERA-5 MMIC), the boards should
> be ready for purchase via PayPal from Richard within a few weeks. Cost
> should be in the neighborhood of $20-$25 per board, similar to his
> AD9854-only boards.
>
> Watch this space...
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

2590. Re: Looking for Three 1/4" flexible shaft couplers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 04:05:54 UTC
From: ".Bill M" <TheRealExray@netscape.net>
Message-ID: <3CAD22A2.57B16FFE@netscape.net>
Source record: 45048

RalphE wrote:

>
> I have searched the web and every hamfest that I have been to since January
> and have not found any as of yet. I would appreciate it very much if any one
> can help me.
>
> Please reply to me direct. kb4i@comcast.net

Here's one...sez he has more.
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1717248838

2591. B&K E200D Solid State RF Signal Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 04:27:58 UTC
From: David Messing <dmessing@alltel.net>
Message-ID: <3CAD27CE.E812E5A1@alltel.net>
Source record: 45182

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1718020185

Dave
K0RWM

2592. FS: Assorted adjustable Coils & Other Coil form! >> Cheep!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 04:43:08 UTC
From: rlucch2098@aol.com
Message-ID: <20020404234308.22511.00001928@mb-cv.aol.com>
Source record: 45183

Hi All;
Some more coils & stuff found around the Shack :-)

Lot #1 is 52 assorted, adjustable & fixed coils from experimentor, price is $24.00ppd.
Pic>>
http://www.baltimorepress.com/~wa2rqy/52coils.jpg

Lot #2 is 3 coil forms, 2(3-pins) look like the ones used on the GD-1 Heathkit Grid Dipper & the big one(5-pins) is an Amphenol cat# 24-5P and is marked "OSC, 7.0mcs.".
Price is $13.00ppd.
Pic>>

http://www.baltimorepress.com/~wa2rqy/3coilforms.jpg

Thanks es 73....Rich WA2RQY (1961)
WA2RQY's "confusion Radio" Web-Page
Http://members.aol.com/rlucch2098/index.html
RLUCCH2098@aol.com
"Keep those heaters on"

2593. projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 06:16:30 UTC
From: Ross Hockenberry <rhock@westvirginia.net>
Message-ID: <3CAD413E.2000704@westvirginia.net>
Source record: 45184

looking for a project to build a full general coverage reciever.
Something that covers the Ham bands from 10 to 80 meters.

2594. Dumb question on transmitters (Was: AM Transmitter project)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 06:16:50 UTC
From: Michael Bell <michaelb@belfry.cx>
Message-ID: <87it76u0tp.fsf_-_@belfry.cx>
Source record: 45050

4q writes:

<snip>

> But this guy is doing the right thing, he is building the circuits and
> scoping them out and getting his hands dirty! We could use more hams like
> him. It is what I did and now I'm on the air with an HB 100w tube CW
> transmitter and an 8 tube HB Super heterodyne receiver that I designed and
> built myself.

When you operate a separate transmitter and transceiver, what steps do
you follow to ensure you're transmitting on the correct frequency?
Assuming no fancy or accurate frequency displays, I guess you have to
listen to your own signal, to zero-beat your own carrier as well as
the other guys. Or do you necessarily share an external VFO?

--
Michael
Kalgoorlie, Western Australia.

GnuPG fingerprint: E3E4 31C6 6FE6 B4F7 4279 5F48 D417 C044 ECD6 38AB

2595. Re: 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 06:24:06 UTC
From: smitjs@mweb.co.za
Message-ID: <3cad42b9.8466071@news.mweb.co.za>
Source record: 45186
Cross-posted to: sci.electronics.misc,rec.radio.amateur.homebrew

On Thu, 4 Apr 2002 05:54:41 +0100, "Mark" <mark@lineisp.com> wrote:
>
>My initial thoughts are the 10mW would handle the job - but only just -
>however it will depend on where they are being used and whether the units
>are AM, FM or "QM" - sort of a mix of the two. If the unit is FM or QM, then
>if the units have little between them, I think you will find reasonable
>results. However for AM operation, you will almost certainly find operation
>at 100M difficult if not unusuable.
>
>If the modules (FM/QM) are mounted 100m apart in an open field you should
>find things work spinningly well - all things being roughly equal - in
>practice, this is rarely the real-world application.
>
>If the tx is housed in a basement, while the receiver is in another basement
>100M down the road, then I guess you'd be lucky to get through with over 10
>times the power.
>
>Also, when you say "calls for a minimum of 100 meters....", do you mean this
>is the minimum acceptable performance - or do you mean in some applications
>it will need to work at distances greater than the minimum? If the latter,
>then what is the *maximum* range these units will have to contend with?
>
>Lastly, I guess the amount of electrical / electronic noise is important
>too. If you operate these units and someone else has something similar
>operating nearby, you may have interference. Likewise if someone in the area
>has an electrically noisy photocopier etc, this may also give the receiver
>some unwelcome fun to handle - espceically if the signal is only just
>getting through in the first place. Is this acceptable?
>
>My experience with RF is VERY limited - however I have played around with
>433 and 418 modules a little - and (IME) the range can vary HUGELY depending
>on the factors mentioned above. Some of the more learned posters in the ng
>may be able to give you much more useful information. However, whoever tries
>to help, it would be useful to know the following please.
>
>
>Modulation type (AM/FM/QM) (perhaps even part numbers?)
FM audio(75Khz deviation)
>Type of use: / continuous/ pulsed / encoded data / voice / etc
Will be driven from a portable cd player, transmitting a max of about
30 mins of audio at a time.
>Positioning (outside/inside/underground/mobile etc)
Outside, line of sight except for maybe small bushes.

>Is a "noisy" but readable signal acceptable or not.
Totally unacceptable.
>Is loss of signal a MAJOR issue if only occasional.
Yes, can be critical, especially FM background hiss.
>Is performance or price the biggest issue - if you HAD to choose?
Performance.
>Is 433 @ 10mw the only acceptable solution?
Only modules I can find here. I would not even attempt to build
something like this.
>Are you adamant that the RX must also use a whip?
Will be housed in a small box together with a battery, loudspeaker,
and small amplifier. The antenna needs to be out of sight.
>
Hi Mark,
The idea is to place a louspeaker 100m from me. This is for calling
problem jackal, and to keep their attention away from me. The cd
player with me will be connected to the transmitter directly.There may
be some bushes in between, but I need line of sight for the rifle
anyway.
The antenna worries me. How can this be constructed simply, and be out
of sight?
Regards
Johan Smit

2596. Re: 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 06:24:12 UTC
From: smitjs@mweb.co.za
Message-ID: <3cad4305.8542055@news.mweb.co.za>
Source record: 45185

On 04 Apr 2002 19:30:23 GMT, troglodite@aol.com (Troglodite) wrote:

>If you're going to do this, please kindly use the 418mHz modules, not the
>433mHz ones which are right smack in the middle of the 70cm Amateur Radio band.

Where can I get this?
I do not actually think I will ever interfere with any amateur, this
will be used in remote areas, and only 10mw. Not much range.
Regards
Johan Smit

2597. Re: 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 06:24:16 UTC
From: smitjs@mweb.co.za
Message-ID: <3cad4308.8544608@news.mweb.co.za>
Source record: 45187
Cross-posted to: sci.electronics.misc,rec.radio.amateur.homebrew

On Thu, 4 Apr 2002 13:18:37 -0600, "john graesser" <graesser@tca.net>
wrote:

>Did I miss the audio modules, all I saw were data modules, with the handheld
>versions looking a lot like car alarm remote controls, or remote car door
>unlock controls.
>thanks, John.
>KC5DWD
>
The website is terrible, but the modules are there, under 'not
recommended for handheld' if I remember correctly.
I saw this advertised from a local supplier, then found it on the web.
Regards
Johan Smit

2598. Re: 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 06:45:19 UTC
From: "Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net>
Message-ID: <8DB7CEDC7BB1ECA5.5D4077AF96C493CD.43FF6F89C83B394B@lp.airnews.net>
Source record: 45188
Cross-posted to: sci.electronics.misc,rec.radio.amateur.homebrew

On Fri, 05 Apr 2002 06:24:06 GMT, smitjs@mweb.co.za (Johan Smit)
wrote:

>The idea is to place a louspeaker 100m from me. This is for calling
>problem jackal, and to keep their attention away from me. The cd
>player with me will be connected to the transmitter directly.There may
>be some bushes in between, but I need line of sight for the rifle
>anyway.
>The antenna worries me. How can this be constructed simply, and be out
>of sight?

Well, since you're just sending audio, why not just use FRS, or
whatever the local equivalent is? A couple of single channel units
would work fine at 100m LOS, and most already have audio input/output
jacks on them for connecting the CD player and a small amplified
speaker.

Joe Bramblett, KD5NRH
kd5nrh@kd5nrh.net
http://www.kd5nrh.net

2599. Re: 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 07:02:57 UTC
From: Mark <mark@lineisp.com>
Message-ID: <I0cr8.613$vn2.96977@news2-win.server.ntlworld.com>
Source record: 45189
Cross-posted to: sci.electronics.misc,rec.radio.amateur.homebrew

"Johan Smit" <smitjs@mweb.co.za> wrote in message
news:3cad42b9.8466071@news.mweb.co.za...
> >Modulation type (AM/FM/QM) (perhaps even part numbers?)
> FM audio(75Khz deviation)
> >Type of use: / continuous/ pulsed / encoded data / voice / etc
> Will be driven from a portable cd player, transmitting a max of about
> 30 mins of audio at a time.
> >Positioning (outside/inside/underground/mobile etc)
> Outside, line of sight except for maybe small bushes.
> >Is a "noisy" but readable signal acceptable or not.
> Totally unacceptable.
> >Is loss of signal a MAJOR issue if only occasional.
> Yes, can be critical, especially FM background hiss.
> >Is performance or price the biggest issue - if you HAD to choose?
> Performance.
> >Is 433 @ 10mw the only acceptable solution?
> Only modules I can find here. I would not even attempt to build
> something like this.
> >Are you adamant that the RX must also use a whip?
> Will be housed in a small box together with a battery, loudspeaker,
> and small amplifier. The antenna needs to be out of sight.
> >
> Hi Mark,
> The idea is to place a louspeaker 100m from me. This is for calling
> problem jackal, and to keep their attention away from me. The cd
> player with me will be connected to the transmitter directly.There may
> be some bushes in between, but I need line of sight for the rifle
> anyway.
> The antenna worries me. How can this be constructed simply, and be out
> of sight?
> Regards
> Johan Smit

Ok John.

Several things come to mind here - the first being that 10mw @ 433 Mhz is
not likely to give you satisfatory performance.

The line of sight is encouraging and helps but if the RX aerial needs to be
out of sight, it also suggest it is not going to be of optimum length. that
said, notwithstanding the eyesight of the jackal - surely if the aerial was
painted brown / green it could be made to blend in reasonably couldn't it?

Wherabouts in the world are you John?

There are, for example a variety of "semi-powerful bugs" which typically operate around 75-120 Mhz - and although illegal to use in the UK, may be legal in your country..........

They will enable any FM radio to be used as your receiver (reducing costs) and will give a fairly good range (you can get a range of around 500M max which would give very good performance for your application) and the cost if usually around £20-£30. Most of them have a microphone built in but some also are avaailble with an AUX input.

One example, with 50mw output is available here http://www.veronica.co.uk/lpkit.htm and will cost you between £17 and £21 for a BUILT unit ready to run - price varies according to where it is being posted to.

Not legal for use in many Countries, but that is a matter for you to ponder, not me to judge.

At 50mW you are not likely to be causing a major nuisance to anyone - in fact it is incredibly unlikely anyone will even know you are using it providing you do not "sit on top" of the local radio station in which case neighbours may get a bit miffed.

Cheap, will do the job, ready assembled.

If you prefer to use the 433 system, I think you are going to need to either re-think the range you require and/or re-think your aerials a bit.

Mark

2600. Re: projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 07:13:14 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <C7cr8.1705$%B7.189167727@news.inreach.com>
Source record: 45190

Ross:

Without knowing what your homebrewing skill level is, it is hard to make suggestions...

You might get some ideas here:
http://members.aol.com/gapershi/radio/radio.htm

or here: http://pmp3.net/harry/

Good luck and 73,

Roger K6XQ

2601. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 07:46:34 UTC
From: Joe Mama <joemama@prozac.net>
Message-ID: <tgkqaukr5k431alo8fe5ptb9v871kahgdf@4ax.com>
Source record: 45193
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Fri, 05 Apr 2002 00:20:43 GMT, Zoran Brlecic <WA7AA@attbi.com> wrote:

>> I'm only fifty four, so I don't remember the bullshit examples that you
>> cited, but you're probably some young punk, dumb asshole or both who has no
>> respect or consideration for anything but himself and probably doesn't even
>> know what it was like when I grew up and doesn't care because of your self
>> centered attitude and government-media brainwashing that tells you what to
>> do, how to do it, when to take your Prozac and what to think cuz you lack
>> the mental capacity to make your own decisions..

>> You make me wanna puke..

> Gee, what happened? I thought you were from the "old school that put more value on
> kindness". Turns out you are just another baby-boomer, the generation that is the
> epitome of self-interest, greed and reckless spending in both private lives and in the
> government affairs. You people lived through the best of times, racked up a cozy
> lifestyle, put the future generations in enormous debt, and now dish out moral lectures
> while continuing to bankrupt Social Security and Medicare.

I'm also from the "old school" that when someone doesn't know when to shut
their smartassed mouth and ends up getting it shut for them, that they learn
a valuable lesson and chalk it up to experience, but it appears that you
come from the new breed of jerkoff punk that continues to mouth off and
deliberately provoke others into an argument so that they can call the cops
and try to have the guy arrested for knocking the living shit out of you..

I live in the San Francisco Bay Area. Zip me an e-mail and let me know when
your in the area, cuz i'd love to eyeball with you. I get up to W7 land
occasionally as well if you're in the Oregon/Washington area, but I wouldn't
trust you as far as I could throw you cuz trash like you have no integrity.

Not to mention that you don't know what in the hell you're talking about..

Please don't bother to respond, cuz I won't..

-jm

1968 XLCH under construction
1984 XR-1000
1987 Jaguar XJ6 Vanden Plas

To return mail no spam, change the reply address to:

"joemama at rarebird dot net"

2602. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 08:06:06 UTC
From: Joe Mama <joemama@prozac.net>
Message-ID: <8qlqau8hli7o3ilimdh7a9195qv6juua3d@4ax.com>
Source record: 45194
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Thu, 04 Apr 2002 03:31:27 -0400, ".Bill M" <TheRealExray@netscape.net>
wrote:

>> Because my boss was a jerk, I left that job for another one "over the hill"
>> in "civilisation" which offered a very substantial increase in pay, but I
>> still miss the people and the laid back and virtually stress free work
>> atmosphere which I had held onto for five years because in many ways it was
>> worth more to me than all the money in the world..

> Maybe that exists somewhere now, but the current risk is that the same
> openness will have you sitting behind bars when some doper whines to the
> police that you stole his dope. Did I say risk? That was a risk 20
> years ago...its almost a norm these days that a serviceman left in the
> house has stolen something.

I hear where you're coming from, and even though the area is full of
potheads, this mentality is not at all prevalent. I worked there for five
years and *never* even one time had a client call my honesty into question..

And I hate to disagree with you, but in the twenty four years that i've
worked in this type of capacity in the San Francisco Bay Area and elsewhere,
I can't count the times on one hand that any coworkers have been accused of
stealing from a client..

> I hitchhiked the whole country in those days...I wouldn't dare hit a
> highway now. Things have indeed changed and thats a sad comment on our
> society. Its a great memory, tho.

The only time that I would pick up a hitchhiker would be if he was carrying
a gas can, and even then I would exercise extreme caution. If I use bad
judgement and get a knife or gun pulled on me, then we'll see how long it
takes him to hand it over or throw it out the window after I floor the gas
pedal and threaten to run into a concrete overpass abutment. If i'm gonna
die anyway i've got absolutely nothing to lose, but he does..

-jm

1968 XLCH under construction
1984 XR-1000
1987 Jaguar XJ6 Vanden Plas

To return mail no spam, change the reply address to:

"joemama at rarebird dot net"

2603. More on 17m amp prob

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 08:12:30 UTC
From: n2cqr@clix.pt
Message-ID: <3cad5c53.4660852@news.clix.pt>
Source record: 45191

Thanks to all those who sent suggestions. I realized that I left out some needed info.

Here's the TX's lineup: Crystal carrier osc at 5173.5 khz. Balanced modulator consists of two diodes and nulling pot. Mic amp is an LM386. Four crystal (double lattice) filter from Swan 240. NE602 mixer with tuned circuit in output. LO is a VXO using a 12.954 Mhz rock. (I can only swing it 9 khz.) After the mixer there are two high Q tuned circuits (lightly coupled) as a bandpass filter. Then there is an MPF-102 amp (not tuned) (high impedance input to preserve the Q of the bandpass filter) then one fedback broadband 2N2222 amp. On the RF amp board there is one common base amp (because it was there and seemed to provide a good impedance match to the previous amp). Then a broadband 2n3866 and the two parallel Mrf 476s (also broadband).

The final stage was originally designed for class C operation, but I am biasing it for linear operation with the standard diode to ground through a 560 ohm resistor.

The biasing diode is NOT thermally coupled to the final's heat sink. Do you guys think that it would be worth the effort to move that diode so it would heat up along with the finals? What's the theory here? Would that make the diode conduct more, reducing the bias (and the gain) of the final as the thing heats up? Any tips on how to physically connect the diode to the heat sink (just a square of thin aluminum) How about Krazy Glue?

Even with this annoying problem the rig is working very well. 4X4UN said I was 20 over in Israel two nights ago. And everyone likes the audio.

73 Bill CU2JL N2CQR
http://planeta.clix.pt/n2cqr
73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 15.7 W
http://planeta.clix.pt/n2cqr

2604. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 08:15:05 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <d2dr8.192$Fp2.132569@monger.newsread.com>
Source record: 45192
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

"Zoran Brlecic" <WA7AA@attbi.com> wrote in message
news:3CACEDD3.31A3CA1B@attbi.com...
> Joe Mama wrote:
>
> > I'm only fifty four, so I don't remember the bullshit examples that you
> > cited, but you're probably some young punk, dumb asshole or both who has
no
> > respect or consideration for anything but himself and probably doesn't
even
> > know what it was like when I grew up and doesn't care because of your
self
> > centered attitude and government-media brainwashing that tells you what
to
> > do, how to do it, when to take your Prozac and what to think cuz you
lack
> > the mental capacity to make your own decisions..
> >
> > You make me wanna puke..
>
> Gee, what happened? I thought you were from the "old school that put more
value on
> kindness". Turns out you are just another baby-boomer, the generation that
is the
> epitome of self-interest, greed and reckless spending in both private
lives and in the
> government affairs. You people lived through the best of times, racked up
a cozy
> lifestyle, put the future generations in enormous debt, and now dish out
moral lectures
> while continuing to bankrupt Social Security and Medicare.

The baby boomers aren't old enough for SS.
I come from the previous generation and just applied for SS and won't
receive it for some months yet. They had it the best of basically any
generation I've seen and they thought they had it the worst.

We have about another 8 years or so that they can still keep pumping money
into the stock market until the numbers drop significantly.

After them the next generation was the "X" generation, or lost generation, I
believe.
That was when we had the gas shortages (or was it still another generation
later...once you retire, you seem to lose track of time) we started to

recycle, move to cars that lasted and got good milage. Now we have huge SUVs and Trucks...actually they are selling more of those than cars and have been for at least three years.

The baby boomers were still in the time of "planned obsolescence". I had a Ford Mustang that actually rusted out by the time it was 6 months old. Pretty car...built like crap. The Ford company offered to stand behind it and pay half the cost of the repair...I could get it done for less than that at most autobody shops. Then the auto industry and unions couldn't understand why people started buying foreign.
>
I actually stayed with US cars until last fall when one of those imortal teenagers pulled out in front of my Transam with his invinciple SUV. I drove right through his door...The TAs wheels were big enough to put me over his frame. The only thing that saved his life was the massive door post on that GMC Jimmie. Shortened the TA up by about a foot and a half. Put the right front tire back into the firewall and there was no space left under the dash to get at the wiring because it drove the fire wall back so far. I wasn't even sore the next day. BTW, I only had time to leave about 12-15 feet of skid marks. I was punchy (and deaf) from the air bags for about half an hour.

The control head for the 2-meter rig was mounted on the dash. I stopped so quick, it layed down flat...Bent the metal right down to the plastic.

BTW, I had an FT101B and "thought" it had 6146s in it. Damn near got electrocuted off that rig due to a poor soldering job from the factory..
--
Roger (K8RI EN73)
WWW.RogerHalstead.com
N833R, World's Oldest Debonair? S#CD-2

> 73 .... Zoran WA7AA
>
>
>

2605. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 08:38:15 UTC
From: Zoran Brlecic <WA7AA@attbi.com>
Message-ID: <3CAD6274.8B4BA359@attbi.com>
Source record: 45195
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Joe Mama wrote:

> On Fri, 05 Apr 2002 00:20:43 GMT, Zoran Brlecic <WA7AA@attbi.com> wrote:
>
> >> I'm only fifty four, so I don't remember the bullshit examples that you
> >> cited, but you're probably some young punk, dumb asshole or both who has no
> >> respect or consideration for anything but himself and probably doesn't even
> >> know what it was like when I grew up and doesn't care because of your self
> >> centered attitude and government-media brainwashing that tells you what to
> >> do, how to do it, when to take your Prozac and what to think cuz you lack
> >> the mental capacity to make your own decisions..
>
> >> You make me wanna puke..
>
> > Gee, what happened? I thought you were from the "old school that put more value on
> > kindness". Turns out you are just another baby-boomer, the generation that is the
> > epitome of self-interest, greed and reckless spending in both private lives and in the
> > government affairs. You people lived through the best of times, racked up a cozy
> > lifestyle, put the future generations in enormous debt, and now dish out moral lectures
> > while continuing to bankrupt Social Security and Medicare.
>
> I'm also from the "old school" that when someone doesn't know when to shut
> their smartassed mouth and ends up getting it shut for them, that they learn
> a valuable lesson and chalk it up to experience, but it appears that you
> come from the new breed of jerkoff punk..... [and so on, ad nauseam.....]

> Please don't bother to respond, cuz I won't..

To what? Did you say anything remotely intelligent?

2606. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 08:44:08 UTC
From: Zoran Brlecic <WA7AA@attbi.com>
Message-ID: <3CAD63D3.35F2724@attbi.com>
Source record: 45196
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Roger Halstead wrote:

> I had a Ford Mustang that actually rusted out by the time it was 6 months old.
>
> Pretty car...built like crap. The Ford company offered to stand behind it
> and pay half the cost of the repair...I could get it done for less than that
> at most autobody shops. Then the auto industry and unions couldn't
> understand why people started buying foreign.

Interesting. I had a 1998 Mustang for over three years + 60k miles and didn't have a single problem with it. The best car I ever had. If my company didn't insist on giving me a company car, I never would have sold it...

73 .... Zoran WA7AA

2607. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 09:25:56 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0204050125.3101363@posting.google.com>
Source record: 45047
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3CAD1F22.1E41@pop.removethistomailme.net>...

> The initial round of PC boards is back and as usual Richard Hosking (and
> his board house) have done a great job. Pics at:
>
> http://209.95.122.40/jm/synth2.jpg
> http://209.95.122.40/jm/synth.jpg
>
> The synth is up and running fine on this PCB, and once we make a few
> minor tweaks (like simplifying the DDS power supply regulator circuit
> and substituting an improved part for the ERA-5 MMIC), the boards should
> be ready for purchase via PayPal from Richard within a few weeks. Cost
> should be in the neighborhood of $20-$25 per board, similar to his
> AD9854-only boards.
>
> Watch this space...
>
> -- jm

Looks great - pretty as a Playboy bunny:)

Have you had a chance to look at crosstalk and spurs? If so, do you
see much difference between the pcb and the original?

Thanks for doing this, John. I can see a lot of simple, inexpensive
projects based on these boards. You are providing a new level of
performance and capability at a very inexpensive price, and I expect
to see your boards used in many ways.

For example, this would provide the perfect trigger for an
inexpensive, high-performance sampler I've been working on. You can
see the description at

http://www3.sympatico.ca/add.automation/sampler/intro.htm

Please let us know when the boards are ready!

Best Regards, Mike

2608. Re: Looking for Three 1/4" flexible shaft couplers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 13:33:51 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3CADA693.8E350E82@gte.net>
Source record: 45049

RalphE wrote:

> I am building an HF Amplifier and I am in need of Three , I am building an
> HF Amplifier and I am in need of Three 1/4" flexible shaft couplers for my
> capacitors and roller connections. These are the couplers that have a 1/4"
> collar on each side with a ceramic circle center to isolate the conductivity
> of the shaft.
>
> I have searched the web and every hamfest that I have been to since January
> and have not found any as of yet. I would appreciate it very much if any one
> can help me.
>
> Please reply to me direct. kb4i@comcast.net
>
> Please state price and condition.
>
> Thanks,
>
> Phillip Johnson KB4I
> Fairview, Tn

Small Parts in Miami (web presence) used to have them- I used them in a 1296 cavity amp. 1/4" shaft one end 1/4" "socket at the other.
Even if the y no longer carry them, every homebrewer should have their catalog.
Dale W4OP

2609. Re: 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 14:12:59 UTC
From: Rich Grise <richgrise@earthlink.net>
Message-ID: <3CADB0DD.20EA@earthlink.net>
Source record: 45051
Cross-posted to: sci.electronics.misc,rec.radio.amateur.homebrew

Johan Smit wrote:
...
> Hi Mark,
> The idea is to place a louspeaker 100m from me. This is for calling
> problem jackal, and to keep their attention away from me. The cd
> player with me will be connected to the transmitter directly.There may
> be some bushes in between, but I need line of sight for the rifle
> anyway.
> The antenna worries me. How can this be constructed simply, and be out
> of sight?
> Regards
> Johan Smit

The antenna is no problem. A jackal has no idea what an antenna is.
If it makes you feel any better, you could paint it green. At
those frequencies, a 3-element yagi would fit in about a 1 sq. ft.
footprint (about 1/3 M square).
--
Cheers!
Rich

"We have met the enemy, and he is us!"
- Pogo Possum, ca. 1950's

2610. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 14:28:40 UTC
From: SideBand <abNO8SPAMlr@csotbs.org>
Message-ID: <3CADB498.30204@csotbs.org>
Source record: 45052
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I thought Tricky Dick bankrupted Social Security and Medicare back in the
'70's to pay for the Vietnam war... Of course, I was between 1 and 5 during
that war, so my memory might be a little off....

de AB8LR, Chris

Zoran Brlecic wrote:

> Joe Mama wrote:
>
>
>>I'm only fifty four, so I don't remember the bullshit examples that you
>>cited, but you're probably some young punk, dumb asshole or both who has no
>>respect or consideration for anything but himself and probably doesn't even
>>know what it was like when I grew up and doesn't care because of your self
>>centered attitude and government-media brainwashing that tells you what to
>>do, how to do it, when to take your Prozac and what to think cuz you lack
>>the mental capacity to make your own decisions..
>>
>>You make me wanna puke..
>>
>
> Gee, what happened? I thought you were from the "old school that put more value on
> kindness". Turns out you are just another baby-boomer, the generation that is the
> epitome of self-interest, greed and reckless spending in both private lives and in the
> government affairs. You people lived through the best of times, racked up a cozy
> lifestyle, put the future generations in enormous debt, and now dish out moral lectures
> while continuing to bankrupt Social Security and Medicare.
>
> 73 .... Zoran WA7AA
>
>
>
>

--
73 de AB8LR, Chris

http://csotbs.shopiwon.com/ for great deals on computer products.

2611. Re: Dumb question on transmitters (Was: AM Transmitter project)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 15:02:14 UTC
From: w9wi@linux1.localdomain
Message-ID: <slrnaarf9j.e4p.w9wi@linux1.localdomain>
Source record: 45054

On 05 Apr 2002 06:16:50 +0000, Michael Bell <michaelb@belfry.cx> wrote:
>When you operate a separate transmitter and transceiver, what steps do
>you follow to ensure you're transmitting on the correct frequency?
>Assuming no fancy or accurate frequency displays, I guess you have to
>listen to your own signal, to zero-beat your own carrier as well as
>the other guys.

Yep.

Hopefully, your transmitter has a "spotting" switch which causes the
low-power stages to generate a signal without feeding it to the power amp or
antenna. That way, enough of it leaks through for you to hear it and
zero-beat the other guy, but none of it gets radiated to interfere with the
people you're trying to zero-beat.

--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

2612. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 15:03:32 UTC
From: ".Bill M" <TheRealExray@netscape.net>
Message-ID: <3CADBCC4.2C45E654@netscape.net>
Source record: 45053
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

SideBand wrote:
>
> I thought Tricky Dick bankrupted Social Security and Medicare back in the
> '70's to pay for the Vietnam war... Of course, I was between 1 and 5 during
> that war, so my memory might be a little off....
>
> de AB8LR, Chris

Just wait another 20 years. Then Zoran's kids will be blaming HIS
generation for everything.
-Bill

2613. Re: Looking for Three 1/4" flexible shaft couplers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 16:09:53 UTC
From: Carl Hoffmeyer <c.hoffmeyer@worldnet.att.net>
Message-ID: <I%jr8.5008$QC1.492380@bgtnsc04-news.ops.worldnet.att.net>
Source record: 45055

Phillip,
As an outside possibility, try:
http://www.mscdirect.com - MSC tool catalogue machine supply corp

They carry a number of flexible couplings, some insulated, that might
be adaptable for your amplifier.
- Carl (formerly WB2YHE)

"RalphE" <k4ffa@comcast.net> wrote in message
news:p69r8.233242$Gf.21520927@bin2.nnrp.aus1.giganews.com...
> I am building an HF Amplifier and I am in need of Three , I am building
an
> HF Amplifier and I am in need of Three 1/4" flexible shaft couplers for
my
> capacitors and roller connections. These are the couplers that have a
1/4"
> collar on each side with a ceramic circle center to isolate the
conductivity
> of the shaft.
>
> I have searched the web and every hamfest that I have been to since
January
> and have not found any as of yet. I would appreciate it very much if any
one
> can help me.
>
> Please reply to me direct. kb4i@comcast.net
>
> Please state price and condition.
>
> Thanks,
>
> Phillip Johnson KB4I
> Fairview, Tn
>
>

2614. Re: Q of two coils in series

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 21:27:51 UTC
From: la8ak.xnd@online.no
Message-ID: <3cae0f80.75523393@news.online.no>
Source record: 45056

On Tue, 02 Apr 2002 Paul Keinanen OH3LWR <keinanen@sci.fi> wrote:

>
>However, the Q=650 for a 1.8 mH coil at LF sounds quite optimistic. Is
>this an actual measurement at 150 kHz ? Where is the parasitic
>resonance of that coil ? It appears as if the measurements are taken
>close to the self resonance frequency, in which case the distributed
>capacitance between the turns form a parallel resonance circuit and
>close to resonance, the combined reactance can be much higher than the
>inductive or capacitive reactance alone and thus, the apparent Q might
>be quite high.
>
I measured it using Radiometer Q-meter with 500pF (max internal
capacitance), it was somewhat above 136kc, possibly 150kc, so I
assumed the difference wouldn't be too much on 136kc

Tonight tested a 4.4mH coil from similar SRT carrier frequency
equipment, and with 500pF - below 100kc the Q was very high, peaked
the scale with lowest setting of power, maybe 900, but cannot be
confirmed. With external 1.06nF (total = 1506pf) it resonnated on
60kc, but now Q measured only 500.

>To calculate the Q of the two coils in series, in addition to
>calculating the combined inductive reactance and resistance, you also
>have to calculate the resulting combined distributed capacitance and
>from that the capacitive reactance, combine the parallel connected
>inductive and capacitive reactance and calculate the Q by applying the
>series resistance (losses).
>
well, the question shouldn't have been asked the way I did, and I
cancelled it within seconds (forgot it was in the outbox), but just
too late. The smaller coil is loaded with antenna impedance and the
actual total Q is much lower, somewhere in region of 30-40 dependent
on antenna impedance, which may be 75 ohm - from the active antenna on
the roof (so it is no question of loop aerial).

It was a concept for 136kHz dual conversion converter to 3560kHz I'd
like to try, it is now finished, but I think I'd better try another
solution, because the first mixer may be overloaded, so selectivity in
first IF may not help. I am looking into using SL6440 device which I
was given today. But interesting to try the experiment and wasting
some time, hi.

73,
Jan-Martin
LA8AK

--
remove ,xnd to reply

2615. Re: Home Brew Antenna Analyser

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 21:27:52 UTC
From: la8ak.xnd@online.no
Message-ID: <3cae1220.76195466@news.online.no>
Source record: 45057

It is an interesting article in ARRL handbook 1981, page 16-34....,
Operating Impedance Bridge, covering at least 160-6m, possibly 144MHz.
You could use some more modern detectors like LTC5507 or MC3356

LA6VM once built it and made a demonstration at the local club of this
instrument, believe the idea is patented and has been produced in
larger quantities for the navy

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

2616. Re: Shielded small-loop design - An RFC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 21:27:52 UTC
From: la8ak.xnd@online.no
Message-ID: <3cae0f9e.75553352@news.online.no>
Source record: 45058

On Tue, 02 Apr 2002 19:52:32 GMT, "Gollywog" <eng@ilos.net> wrote:

>
>Everybody:
>
>I'm looking for comments and suggestions on an electrostaticly shielded
>small-loop antenna circuit I'm working on. I wrote a great big post complete
>with links to diagrams and schematics. By the time I was done it looked more
>like a one page web site.
>
>Please visit
>http://www.ilos.net/~eng/rrahrfc.html
>
>Thanks,
>Mike (va4mgw)
>
it was a french idea on such design, because you don't need a complete
screen, chicken fence will do, and it is possible to use larger holes
in the screen, believe the principle is called Ruse-antenna

The main problem is to find suitable low resistance wire to reduce
losses, since radiation resistance is in the region of micro-ohms

I may have made a drawing for l'antenna de la Rouse

73
LA8AK
--
remove ,xnd to reply

2617. MOUSFET RF Amplifier ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 21:28:03 UTC
From: milo17@aol.com
Message-ID: <20020405162803.01947.00002177@mb-df.aol.com>
Source record: 45059

I seem to recall a relatively simple amplifier described in 73 magazine a while ago titled MOuSFET Amplifier. I cant seem to find it on the web. Anyone have any info on this amp or something similar ? I plan on using it with an FT-817 While at home. Thanks to the group in advance - Mike N2JVT

2618. transformer inverts phase

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 22:27:20 UTC
From: Kurt Stocklmeir <kurtstocklmeir@worldnet.att.net>
Message-ID: <01c1dce8$f8ed28e0$59274f0c@oemcomputer>
Source record: 45060

I would like to understand how a transformer can change phase. I think a center tap can invert the phase. I guess this applies to current. I do not know if this can apply to voltage. I would like to understand if different phases can be created by using a tap at different places on a coil. I would like to understand if there are a lot of waves with different frequencies will all the waves have the same change of phase.

Thank you for any answers.

2619. Re: transformer inverts phase

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 22:32:08 UTC
From: Gary Glaenzer <nobulltrans@mchsi.com>
Message-ID: <IBpr8.233282$q2.21149@sccrnsc01>
Source record: 45061

it doesn't 'invert phase'

the input and output waveforms may be of the same polarity or of opposite polarity, depending on which end of the winding is being used as a reference, but to say it 'inverts phase' in not accurate (although commonly used).

"Kurt Stocklmeir" <kurtstocklmeir@worldnet.att.net> wrote in message news:01c1dce8$f8ed28e0$59274f0c@oemcomputer...
> I would like to understand how a transformer can change phase. I think a
> center tap can invert the phase. I guess this applies to current. I do
> not know if this can apply to voltage. I would like to understand if
> different phases can be created by using a tap at different places on a
> coil. I would like to understand if there are a lot of waves with
> different frequencies will all the waves have the same change of phase.
>
> Thank you for any answers.

2620. Re: Dumb question on transmitters (Was: AM Transmitter project)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-05 22:36:38 UTC
From: 4q <nospam@nospam-tek.com>
Message-ID: <a8l8r402p7l@enews1.newsguy.com>
Source record: 45062

"Michael Bell" <michaelb@belfry.cx> wrote in message
news:87it76u0tp.fsf_-_@belfry.cx...
>
> 4q writes:
>
> <snip>
>
> > But this guy is doing the right thing, he is building the circuits and
> > scoping them out and getting his hands dirty! We could use more hams
like
> > him. It is what I did and now I'm on the air with an HB 100w tube CW
> > transmitter and an 8 tube HB Super heterodyne receiver that I designed
and
> > built myself.
>
> When you operate a separate transmitter and transceiver, what steps do
> you follow to ensure you're transmitting on the correct frequency?
> Assuming no fancy or accurate frequency displays, I guess you have to
> listen to your own signal, to zero-beat your own carrier as well as
> the other guys. Or do you necessarily share an external VFO?
>
> --
> Michael
> Kalgoorlie, Western Australia.
>
> GnuPG fingerprint: E3E4 31C6 6FE6 B4F7 4279 5F48 D417 C044 ECD6 38AB

Actually, since I am a Novice I have a very small band to operate in. So, much like the novices of a generation ago I am rock bound. Sort of. I actually have a couple of rocks in both the 80m novice band and the 40 meter novice band and I modified the original McCoy transmitter design with a variable cap and coil so I can pull the rocks about 3-5kc, which is not enough to get me out of the band but does give me a little latitude to play with. I also have a McCoy designed transmatch to make sure I'm not radiating strong harmonics.

But just to make sure I put my computer designer skills to work and built a frequency counter based on an ATmel AVR that is coupled to the oscillator output and monitors the frequency. I also built a bar LED decibel meter that measures the power output of my frequency and the next two harmonics at the antenna. A fudge and a cheat I know but I'm building a tube VFO based on another McCoy design (is there anything that man could not do?) and today's FCC requirements are a bit more restrictive as to band tolerance and harmonic radiation. So I felt it would be prudent to keep a close eye on my transmission. Like I say, not strictly in keeping with the old time tube

tradition but it should keep the feds and my fellow neighborhood hams happy.

Nice thing about being rock bound is that if I switch out the VXO device and go strictly by the rock frequency I can tune my HB receiver to that exact frequency. Thus I always have a known good starting point on my main HB receiver dial or any of the experimental regens that I'm always building (3 hollowstate including one with galena crystal/cat whisker detector and "30" amplifier tube, and 2 solid-state, so far).

Rick KC0GIX

2621. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 00:15:45 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CAE3E31.40EB@pop.removethistomailme.net>
Source record: 45063
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett wrote:
>
> Looks great - pretty as a Playboy bunny:)
>

Well, I probably wouldn't go THAT far...!

> Have you had a chance to look at crosstalk and spurs? If so, do you
> see much difference between the pcb and the original?
>

The PCB's broadband noise floor seems to be a couple dB worse, but
in-band noise appears to be pretty much the same.
http://209.95.122.40/jm/compare.gif shows an early prototype (not the
same as the ADF4112-based unit on my web page) in purple, with the new
PCB in blue.

The open point-to-point layout of the prototype has less broadband noise
(presumably from the digital section), but it's picking up 15.7 kHz junk
from a TV in a neighboring apartment. The PCB has better self-shielding
properties but also worse intra-circuit coupling. Not unexpected.

Overall noise performance, both in-band and out-of-band, is still
superior in the ADF4112 synthesizer at
http://www.qsl.net/ke5fx/synth.html. But the loop on the PCB uses an
easier-to-obtain chip and locks up quite a bit faster.

> Thanks for doing this, John. I can see a lot of simple, inexpensive
> projects based on these boards. You are providing a new level of
> performance and capability at a very inexpensive price, and I expect
> to see your boards used in many ways.
>
> For example, this would provide the perfect trigger for an
> inexpensive, high-performance sampler I've been working on. You can
> see the description at
>
> http://www3.sympatico.ca/add.automation/sampler/intro.htm
>

Neat stuff... very nicely documented!

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2622. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 00:19:55 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CAE3F2F.2A91@pop.removethistomailme.net>
Source record: 45064
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Gary Glaenzer wrote:
>
> fine looking work, John
>

Thanks -- this is the first surface-mount project I've ever done. I'm
pretty much sold on it.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2623. Re: transformer inverts phase

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 00:25:49 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <uasg5gpu2k7d98@corp.supernews.com>
Source record: 45065

> the input and output waveforms may be of the same polarity or of
opposite
> polarity, depending on which end of the winding is being used as a
> reference, but to say it 'inverts phase' in not accurate (although
commonly
> used).
>
True - the only way to change phase is by creating a time delay in one
of the signals.

2624. Re: More on 17m amp prob

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 03:13:14 UTC
From: Kent Haase <ijeh99@mb.sympatico.ca>
Message-ID: <IEtr8.1986$1W1.51373@news1.mts.net>
Source record: 45066

"Bill Meara" <n2cqr@clix.pt> wrote in message
news:3cad5c53.4660852@news.clix.pt...
> Thanks to all those who sent suggestions. I realized that I left out
> some needed info.
> <clip>
> The biasing diode is NOT thermally coupled to the final's heat sink.
> Do you guys think that it would be worth the effort to move that diode
> so it would heat up along with the finals? What's the theory here?

The forward voltage drop of a p-n junction decreases with an increase in temperature. That is what contributes to thermal runaway in a bipolar transistor. I'm not too sure that the statement that beta increases with temperature, but I have been wrong before.

> Would that make the diode conduct more, reducing the bias (and the
> gain) of the final as the thing heats up?

The drop across the diode (ie the bias voltage) tracks the drop across the transistor's p-n junction, thus providing enough bias to maintain the same base current with changes in temperature.

> Any tips on how to
> physically connect the diode to the heat sink (just a square of thin
> aluminum) How about Krazy Glue?

Mount the diode in physical contact with the heatsink and use some heat sink compound to thermally bond it to the sink. The stiffness of the diode's leads will probably be enough to hold it against the sink.

>
> Even with this annoying problem the rig is working very well. 4X4UN
> said I was 20 over in Israel two nights ago. And everyone likes the
> audio.
>
> 73 Bill CU2JL N2CQR
> http://planeta.clix.pt/n2cqr
> 73 de Bill CU2JL N2CQR
> Sao Miguel Island, The Azores, Portugal
> 37.7 N 15.7 W
> http://planeta.clix.pt/n2cqr

2625. Re: More on 17m amp prob

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 03:18:09 UTC
From: Kent Haase <ijeh99@mb.sympatico.ca>
Message-ID: <jJtr8.1987$1W1.51420@news1.mts.net>
Source record: 45067

Guess I should sign when I reply

Kent VE4KEH

"Bill Meara" <n2cqr@clix.pt> wrote in message
news:3cad5c53.4660852@news.clix.pt...
> Thanks to all those who sent suggestions. I realized that I left out
> some needed info.
> <clip>
> The biasing diode is NOT thermally coupled to the final's heat sink.
> Do you guys think that it would be worth the effort to move that diode
> so it would heat up along with the finals? What's the theory here?

The forward voltage drop of a p-n junction decreases with an increase in temperature. That is what contributes to thermal runaway in a bipolar transistor. I'm not too sure that the statement that beta increases with temperature is true, but I have been wrong before.

> Would that make the diode conduct more, reducing the bias (and the
> gain) of the final as the thing heats up?

The drop across the diode (ie the bias voltage) tracks the drop across the transistor's p-n junction, thus providing enough bias to maintain the same base current with changes in temperature.

> Any tips on how to
> physically connect the diode to the heat sink (just a square of thin
> aluminum) How about Krazy Glue?

Mount the diode in physical contact with the heatsink and use some heat sink compound to thermally bond it to the sink. The stiffness of the diode's leads will probably be enough to hold it against the sink.

>
> Even with this annoying problem the rig is working very well. 4X4UN
> said I was 20 over in Israel two nights ago. And everyone likes the
> audio.
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> 73 Bill CU2JL N2CQR
> http://planeta.clix.pt/n2cqr
> 73 de Bill CU2JL N2CQR
> Sao Miguel Island, The Azores, Portugal
> 37.7 N 15.7 W
> http://planeta.clix.pt/n2cqr

2626. Yaesu FT-101 and Fox-Tango mods

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 04:01:07 UTC
From: AB Brown <abbrown@nospammail.com>
Message-ID: <a8luko$48r$1@slb0.atl.mindspring.net>
Source record: 45069
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Just received the Fox-Tango Newletters library. I am interested in performing several of the mods listed, starting with the doubly balanced mixer in the receiver, using the MC1496. Although no circuit board patterns are disclosed in ANY of the volumes, I believe I have enough information from the schematics and parts layouts to construct the mixer unit. Does anyone have experience in fabricating their own mixer boards and could provide suggestions? How much difference does this mod make in the receiver, which seems poor on 10/15 meters at present? Several experimenters mention IMD problems due to the IC used. Any better substitutions?

Any other mod suggestions would be appreciated.

Thanks,
AB

2627. Re: Looking for Three 1/4" flexible shaft couplers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 04:23:14 UTC
From: "Geoffrey G. Rochat" <geoff777@777pkworks.com>
Message-ID: <a8lsm0$md4$1@news.utelfla.com>
Source record: 45068

RalphE wrote in message ...
> I am building an HF Amplifier and I am in need of Three , I am
building an
>HF Amplifier and I am in need of Three 1/4" flexible shaft couplers
for my
>capacitors and roller connections. These are the couplers that have a
1/4"
>collar on each side with a ceramic circle center to isolate the
conductivity
>of the shaft.

Check out Surplus Sales of Nebraska (www.surplussales.com),
specifically:

http://www.surplussales.com/ShaftHardware/ShaftH-12.html

2628. MANUAL SALE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 04:52:31 UTC
From: joeee1621@aol.com
Message-ID: <20020405235231.01011.00002966@mb-cu.aol.com>
Source record: 45070

NEED A MANUAL? WE PROBABLY HAVE IT. CONTACT US FOR A LIST-OVER 680 LISTINGS AT PRESENT-. WE PROBABLY HAVE A COPY OF WHAT YOU NEED. ALL MANUALS $16 SHIPPED UNLESS OTHERWISE NOTED.

2629. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 06:00:43 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3cae8d78$0$30422@echo-01.iinet.net.au>
Source record: 45071
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John
Would shielding sections of the board and/or separating parts of the ground plane make any difference?
Also the close in phase noise of the ICOM LO was much worse but the noise at 10 KHz was much better than the point to point version. Was this due to loop filter design or could you identify some other reason - eg VCO performance etc?

Richard

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message news:3CAE3E31.40EB@pop.removethistomailme.net...
> Mike Monett wrote:
> >
> > Looks great - pretty as a Playboy bunny:)
> >
>
> Well, I probably wouldn't go THAT far...!
>
> > Have you had a chance to look at crosstalk and spurs? If so, do you
> > see much difference between the pcb and the original?
> >
>
> The PCB's broadband noise floor seems to be a couple dB worse, but
> in-band noise appears to be pretty much the same.
> http://209.95.122.40/jm/compare.gif shows an early prototype (not the
> same as the ADF4112-based unit on my web page) in purple, with the new
> PCB in blue.
>
> The open point-to-point layout of the prototype has less broadband noise
> (presumably from the digital section), but it's picking up 15.7 kHz junk
> from a TV in a neighboring apartment. The PCB has better self-shielding
> properties but also worse intra-circuit coupling. Not unexpected.
>
> Overall noise performance, both in-band and out-of-band, is still
> superior in the ADF4112 synthesizer at
> http://www.qsl.net/ke5fx/synth.html. But the loop on the PCB uses an
> easier-to-obtain chip and locks up quite a bit faster.
>
> > Thanks for doing this, John. I can see a lot of simple, inexpensive
> > projects based on these boards. You are providing a new level of
> > performance and capability at a very inexpensive price, and I expect
> > to see your boards used in many ways.
> >

> > For example, this would provide the perfect trigger for an
> > inexpensive, high-performance sampler I've been working on. You can
> > see the description at
> >
> > http://www3.sympatico.ca/add.automation/sampler/intro.htm
> >
>
> Neat stuff... very nicely documented!
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

2630. Audio Transmitter schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 07:27:27 UTC
From: TiMe27 <time_@email.si>
Message-ID: <a8m80t$m5g$1@nsnmrro1-gest.nuria.telefonica-data.net>
Source record: 45072

I lookig for Audio transmitter (mono) with modulator based on the Crystal oscilator and without pll loop.With filtering higher harmonics of crystal oscilator !!

TiMe

2631. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 08:50:05 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CAEB6D8.5325@pop.removethistomailme.net>
Source record: 45073
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Richard Hosking wrote:
>
> John
> Would shielding sections of the board and/or separating parts of the ground
> plane make any difference?
> Also the close in phase noise of the ICOM LO was much worse but the noise at
> 10 KHz was much better than the point to point version. Was this due to loop
> filter design or could you identify some other reason - eg VCO performance
> etc?

As I noted in my earlier reply (to Mike Monett?), the Icom's strength is its twin-discrete VCO design. They use a very low loop bandwidth, less than 100 Hz as far as I can tell, and much higher-quality VCOs that cover only half the range (770-1290 MHz as opposed to 1000-2000). There is no way to make an inexpensive off-the-shelf integrated VCO compete with theirs -- I'm doing well to get as close to their performance as I am.

It's possible that some type of shielding arrangement could buy another dB or so in the broadband noise arena, but I doubt it would be worth it.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2632. Re: Antenna for 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 10:13:26 UTC
From: "Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net>
Message-ID: <9F4EDDD6EA13311F.52623D75318FFAE3.2D6B51AB93513E35@lp.airnews.net>
Source record: 45074

On Mon, 01 Apr 2002 08:34:47 -0800, Martin Wehner
<martin@cyclotomic.com> wrote:

>(1) Do you even think it's worth doing it? Can a low-power radio such as
>mine even power a home-built antenna? Has anybody here used this
>transceiver with a home-built antenna before?

I've used 5W and less HT's with my antenna, which is based on the ARRL
handbook's simple quarterwave. Click on the picture of it on my
website for details.

>(2) I am very worried about damaging the radio. Are there any checks I
>can perform before hooking up my home-built antenna to the transceiver?

Well, the guys who say your factory rubber duck is a dummy load are
only part right; normal dummy loads are much better. If your coax is
good and your radiator and all radials are somewhere in the
neighborhood of 19" long, you'll be close enough to avoid damage.

>(3) Currently I am planning on building an antenna I found in the ARRL
>Handbook: the "1/4 lambda antennas for home, car and portable use"
>project (basically a vertical with ground-radials mounted at its base).
>Has anybody ever built that one? How well did it work?

Quite well, considering I've been using it indoors most of the time.
It doesn't match a copper pipe j-pole outside for performance, but
it's much better than anything that mounts directly on the HT.

>(4) Do I need a balun for the antenna if fed with coax?

I've never bothered. SWR on mine is easily adjusted to 1:1, and
rarely goes over 1.3:1 on 2m unless I forget to put the top part of
the radiator on. :)

>(5) I also read the chapter about transmission lines and understand
>there is a problem with using long runs of coax for VHF frequencies. How
>long can I make my transmission line before a noticeable degradation
>occurs?

Depends on what you're using. If you're going more than 25-30ft, it
might be worth investing in a run of RG-8, especially if you plan to
use it for UHF in the future. (Note that the 2m antenna's SWR and
performance on 440 is pretty darn good.)

>(6) What would I use for my transmission line? All I currently have at
>home is RG59/U coax from television installations. Does coax like that
>work?

Well, it works for some things...I have three spools of it as
heavy-duty doorstops here, but I wouldn't really want to use it for a
long feedline when 50ohm coax is reasonably easy to get. Radio Shack
usually has RG-58, and sometimes RG-8.

>(7) What is the best place to buy the hardware from that I'll need for
>construction? The project in the Handbook calls for brass or steel rods.
>Does the Home Depot carry that kind of hardware? If not, I also know of
>an Ace Hardware store around here: would they carry it?

Probably; all my parts came from Lowe's, but in retrospect, I should
have used the smaller non-chain hardware store for most of it.
(Better selection of fasteners at better prices)

>(8) I am planning on sticking the antenna out in my back-yard somewhere.
>Does anything speak against using a simple PVC pipe to raise the antenna
>off the ground?

Not at all. Look at the details of my mast. You could simply cut the
bottom of the pipe at an angle to make a spike, and drive it into the
dirt, or make the base like mine and put cinderblocks on the legs for
more portability.

>(9) Does the antenna need to be connected to a ground rod? I guess I
>don't quite understand why some antennas do have to be and some don't.
>It seems that HF antennas need to be connected to a good ground system,
>whereas these don't.

If you get problems with the radio interfering with other stuff, you
should try grounding the antenna. OTOH, the copper j-pole is also
pretty easy to build, and you can just drive the leftover 3/4" pipe
into the ground to make a (short) mast that will also act as a ground
in the right soil.

Joe Bramblett, KD5NRH
kd5nrh@kd5nrh.net
http://www.kd5nrh.net

2633. Re: 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 10:38:37 UTC
From: smitjs@mweb.co.za
Message-ID: <3caed01a.3349064@news.mweb.co.za>
Source record: 45075
Cross-posted to: sci.electronics.misc,rec.radio.amateur.homebrew

>
>Well, since you're just sending audio, why not just use FRS, or
>whatever the local equivalent is? A couple of single channel units
>would work fine at 100m LOS, and most already have audio input/output
>jacks on them for connecting the CD player and a small amplified
>speaker.
>
>
Hi Joe,
What are you talking about please?
Regards
Johan Smit

2634. Re: 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 10:38:55 UTC
From: smitjs@mweb.co.za
Message-ID: <3caed01d.3351764@news.mweb.co.za>
Source record: 45076
Cross-posted to: sci.electronics.misc,rec.radio.amateur.homebrew

On Fri, 05 Apr 2002 14:12:59 GMT, Rich Grise <richgrise@earthlink.net>
wrote:

>The antenna is no problem. A jackal has no idea what an antenna is.
>If it makes you feel any better, you could paint it green. At
>those frequencies, a 3-element yagi would fit in about a 1 sq. ft.
>footprint (about 1/3 M square).
Hi Rich,
I did not realise the antenna would be that small. A 3-element yagi
would give gain and directiveness, not so? It would all help.
Any idea where I could download dimensions or drawing from?
Antenna construction is not part of my experience.
Regards
Johan Smit

2635. Re: 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 10:39:14 UTC
From: smitjs@mweb.co.za
Message-ID: <3caed01f.3353914@news.mweb.co.za>
Source record: 45077
Cross-posted to: sci.electronics.misc,rec.radio.amateur.homebrew

On Fri, 5 Apr 2002 08:02:57 +0100, "Mark" <mark@lineisp.com> wrote:

>Several things come to mind here - the first being that 10mw @ 433 Mhz is
>not likely to give you satisfatory performance.
>
>The line of sight is encouraging and helps but if the RX aerial needs to be
>out of sight, it also suggest it is not going to be of optimum length. that
>said, notwithstanding the eyesight of the jackal - surely if the aerial was
>painted brown / green it could be made to blend in reasonably couldn't it?
>
>Wherabouts in the world are you John?
>
>There are, for example a variety of "semi-powerful bugs" which typically
>operate around 75-120 Mhz - and although illegal to use in the UK, may be
>legal in your country.....
>
>They will enable any FM radio to be used as your receiver (reducing costs)
>and will give a fairly good range (you can get a range of around 500M max
>which would give very good performance for your application) and the cost if
>usually around £20-£30. Most of them have a microphone built in but some
>also are avaailble with an AUX input.
>
>One example, with 50mw output is available here
>http://www.veronica.co.uk/lpkit.htm and will cost you between £17 and £21
>for a BUILT unit ready to run - price varies according to where it is being
>posted to.
>
>Not legal for use in many Countries, but that is a matter for you to ponder,
>not me to judge.
>
>At 50mW you are not likely to be causing a major nuisance to anyone - in
>fact it is incredibly unlikely anyone will even know you are using it
>providing you do not "sit on top" of the local radio station in which case
>neighbours may get a bit miffed.
>
>Cheap, will do the job, ready assembled.
>
>If you prefer to use the 433 system, I think you are going to need to either
>re-think the range you require and/or re-think your aerials a bit.
>
Hi Mark,
I am wary of doing anything illegal in this venture. Already one
attracts attention from the law if you shine lights around at night,

even if it is the necessary red light. One also attracts interest from greenies and other misguided animal lovers, and I want to keep on doing this. I am not sure if these units will be illegal here, but I presume anything over a certain power in the 88-108Mhz will be illegal. On the other hand, it will be the least part that attracts attention, and it would be difficult for them to prove it is illegal. The light, and the rifle attracts attention, and I will ensure that I stay within the hunting ordinaces.
I am in South Africa, and with the change in government, this was made more difficult, as there are now so many provinces, each with different ordinances. Also each province costs you another hunting licence.
No, the range cannot be reconsidered, jackal are very sharp, and they tend to circle downwind first. You need to get his attention further from you. 100M is a compromise already, and you still need to shoot if he is at least 50m from the loudspeaker. 150M is as far as I would like to shoot at night at such a small moving target. It is not easy, and morally one tries for a clean kill.
The advantage of what you are suggesting is that one can use a cheap car raido as receiver. That will give ample sound output, and already works off a 12 volt battery. Package the radio and the battery in a box (with a small red reflector so you don't kill it) and you are done.
If I recall correctly, there is an avaition band above the 88-108Mhz band, with a decent interval between, so if I can be at 110-115Mhz, I should be in the clear. The car radio could be retuned to cover that. That would still be illegal, I presume, but out there in the bundu, who cares?
Thank you,
Regards
Johan Smit

2636. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 10:51:21 UTC
From: Falk Brunner <Falk.Brunner@gmx.de>
Message-ID: <a8mn7h$st7mn$4@ID-84877.news.dfncis.de>
Source record: 45080
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

"John Miles" <jmiles@pop.removethistomailme.net> schrieb im Newsbeitrag
news:3CAE3E31.40EB@pop.removethistomailme.net...

> The PCB's broadband noise floor seems to be a couple dB worse, but
> in-band noise appears to be pretty much the same.
> http://209.95.122.40/jm/compare.gif shows an early prototype (not the
> same as the ADF4112-based unit on my web page) in purple, with the new
> PCB in blue.
>
> The open point-to-point layout of the prototype has less broadband noise
> (presumably from the digital section), but it's picking up 15.7 kHz junk
> from a TV in a neighboring apartment. The PCB has better self-shielding
> properties but also worse intra-circuit coupling. Not unexpected.

???? Shouldnt a well designed PCB have better intra-circuit coupling? The
flying wires of the prototype should pick up much more (digital) noise than
the (hopefully) well layouted PCB. Did you measure both version inside a
metal box (shielding)?.

--
MfG
Falk

2637. Re: Looking for Three 1/4" flexible shaft couplers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 11:09:35 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3caed6bd.1065761@news.freeserve.net>
Source record: 45078

I use 1/4" 'chocolate block' connectors with a shaft made from a
knitting needle.
Mainline Electronics have the proper "eddystone" couplers ex-stock in
UK. istr about 3 ukp each
hth Mike W
--
On Fri, 5 Apr 2002 23:23:14 -0500, "Geoffrey G. Rochat"
<geoff777@777pkworks.com> wrote:

>
>RalphE wrote in message ...
>> I am building an HF Amplifier and I am in need of Three , I am
>building an
>>HF Amplifier and I am in need of Three 1/4" flexible shaft couplers
>for my
>>capacitors and roller connections. These are the couplers that have a
>1/4"
>>collar on each side with a ceramic circle center to isolate the
>conductivity
>>of the shaft.
>
>
>
>Check out Surplus Sales of Nebraska (www.surplussales.com),
>specifically:
>
>http://www.surplussales.com/ShaftHardware/ShaftH-12.html
>
>

2638. Re: Yaesu FT-101 and Fox-Tango mods

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 11:18:59 UTC
From: la8ak.xnd@online.no
Message-ID: <3caeceb6.124481416@news.online.no>
Source record: 45079
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Fri, 5 Apr 2002 23:01:07 -0500, "AB Brown" <abbrown@nospammail.com>
wrote:

>Just received the Fox-Tango Newletters library. I am interested in
>performing several of the mods listed, starting with the doubly balanced
>mixer in the receiver, using the MC1496. Although no circuit board patterns
>are disclosed in ANY of the volumes, I believe I have enough information
>from the schematics and parts layouts to construct the mixer unit.

yes, it was some silly notes about improving FT-101 using MC1496P and
this was the reason for buying FT101B, but it later turned out that
MC1496P has an IP3 of -20dBm which would not be an improvement at all

Have borrowed several FT-Newsletters from DK3UZ to look at possible
improvements for FT-7 and FT-902, but didn't find anything useful,
most of the mods were more based on feeling than based on practical
experience

73,
LA8AK
--
remove ,xnd to reply

2639. QST XMAS 1952

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 12:21:17 UTC
From: joeee1621@aol.com
Message-ID: <20020406072117.01015.00002806@mb-cu.aol.com>
Source record: 45082

INCREDIBLY FASCINATING OLD MAG...JUST FOR THE COLLINS ADS ITS WORTH IT...$5 SHIPPED.

2640. HEATHKIT HN-31 "CANTENNA"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 12:23:36 UTC
From: joeee1621@aol.com
Message-ID: <20020406072336.01011.00003019@mb-cu.aol.com>
Source record: 45083

NOT A DENT OR MARK OF ANY KIND AND FILLED WITH THE "GOOD" OIL ALSO INCLUDED IS THE ORIGINAL HEATHIKIT MANUAL. OWN A PIECE OF HAM HISTORY WITH THIS MINT DUMMY FROM HEATH. $40 SHIPPED AND WE HAVE A PICTURE.

2641. ICOM MB-49

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 12:25:37 UTC
From: joeee1621@aol.com
Message-ID: <20020406072537.00985.00003555@mb-cu.aol.com>
Source record: 45084

AS NEW IN THE BOX ICOM MB-49 MOUNTING BRACKET FOR THE IC-736/737/738 RADIOS.
$15 SHIPPED.

2642. AUTEK QF-1A

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 12:27:55 UTC
From: joeee1621@aol.com
Message-ID: <20020406072755.01015.00002810@mb-cu.aol.com>
Source record: 45081

TOTALLY AS NEW CONDITION WITH THE ORIGINAL MANUAL...GOES IN THE SPEAKER LINE AND REALLY WORKS...THE ORIGINAL IS STILL THE BEST..HAS A BUILT IN PS AND THE ORIGINAL MANUAL. $50 SHIPPED AND WE DO HAVE A PICTURE IF YOU LIKE.

2643. PALOMAR R-X NOISE BRIDGE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 12:42:17 UTC
From: joeee1621@aol.com
Message-ID: <20020406074217.01007.00003424@mb-cu.aol.com>
Source record: 45085

TUNE YOUR ANTENNA PERFECTLY WITH THIS SIMPLE TO USE AND TOTALLY PERFECT PALOMAR ANTENNA ANALYZER AND IT INCLUDES THE ORIGINAL MANUAL. $45 SHIPPED AND YES WE HAVE A PICTURE.

2644. SWAN SWR-1

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 12:43:53 UTC
From: joeee1621@aol.com
Message-ID: <20020406074353.01003.00003111@mb-cu.aol.com>
Source record: 45086

ABSOLUTLY AS NEW IN-LINE 100 WATT POWER & SWR METER. COMPLETE YOUR SWAN SYSTEM
WITH THIS RARE PERFECT SWAN METER. $25 SHIPPED AND A PICTURE AVAILABLE.

2645. Re: Antenna for 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 13:38:55 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uatuli993rle9@corp.supernews.com>
Source record: 45087

"Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net> wrote in message
news:9F4EDDD6EA13311F.52623D75318FFAE3.2D6B51AB93513E35@lp.airnews.net...

> On Mon, 01 Apr 2002 08:34:47 -0800, Martin Wehner
> <martin@cyclotomic.com> wrote:
>
> >(1) Do you even think it's worth doing it? Can a low-power radio such as
> >mine even power a home-built antenna? Has anybody here used this
> >transceiver with a home-built antenna before?

The lower the power, the more important it is to have a good antenna. Don't
feel like your HT doesn't have enough power for the antenna. Instead, think
of the product of the antenna gain and the power. Big antenna + low power
is roughly equivalent to little antenna + big power.

> >(2) I am very worried about damaging the radio. Are there any checks I
> >can perform before hooking up my home-built antenna to the transceiver?

Your HT probably has SWR protection. Even if it doesn't, the main thing to
avoid is open circuits and shorts. Be a little careful and you will be OK.

> Quite well, considering I've been using it indoors most of the time.
> It doesn't match a copper pipe j-pole outside for performance, but
> it's much better than anything that mounts directly on the HT.

Since you are thinking of mounting it outdoors anyway, a J-pole may be a
better choice. You get more gain, and a little simpler construction.

> >(4) Do I need a balun for the antenna if fed with coax?
>
> I've never bothered. SWR on mine is easily adjusted to 1:1, and
> rarely goes over 1.3:1 on 2m unless I forget to put the top part of
> the radiator on. :)

There are baluns and there are transformers. Baluns don't have anything to
do with SWR. If you have an unbalanced feedline (coax) and an unbalanced
antenna (1/4 wave) then a balun is irrelevant. With an antenna impedance
reasonably close to 50 ohms (OK, a vertical isn't exactly 50 but it's close
enough for engineering purposes) then a transformer will introduce more loss
than it saves.

> Depends on what you're using. If you're going more than 25-30ft, it
> might be worth investing in a run of RG-8, especially if you plan to
> use it for UHF in the future. (Note that the 2m antenna's SWR and
> performance on 440 is pretty darn good.)

Go look up the loss for the feedlines you can find/afford. Since you are comparing to a rubber ducky, which is probably somewhat poorer than an isotropic radiator, it's a little hard to tell what you will gain in the antenna over what you have now. But it's easy to loose 6 dB or so getting to the antenna at 2 meters. At 440 the problem is a lot more severe. 100 feet of RG-58 is a pretty good dummy load at 440, and better sheilded than most, too!

> Probably; all my parts came from Lowe's, but in retrospect, I should

I like Lowe's for antenna parts because they have a big selection, but they may not be the cheapest game in town. Sometimes at the corner hardware you will find someone who will listen to your problem and be pretty creative about helping you find things you can use. In my experience, if you're not doing the expected like putting in kitchen cabinets, you will get a blank stare at Lowe's.

> >(9) Does the antenna need to be connected to a ground rod? I guess I
> >don't quite understand why some antennas do have to be and some don't.
> >It seems that HF antennas need to be connected to a good ground system,
> >whereas these don't.

Even if you are low enough that a direct lightning strike is unlikely, at times of high electrical activity a tall, pointy thing will tend to draw static which could damage your radio. I like to put a high resistance (say 1 Meg) between the non-grounded part of the antenna and ground to safely drain the static without affecting the RF performance. If the static can't build up, you tend not to draw direct strikes. However, if you do take a direct strike, the only thing that will save your radio is having it disconnected. A lightning arrestor between the antenna and ground won't do much for your radio, but it will prevent a strike from following your feedline and setting your house on fire. If the antenna design is one that can be entirely at DC ground then both of these needs can be handled by simply grounding the thing.

> If you get problems with the radio interfering with other stuff, you
> should try grounding the antenna. OTOH, the copper j-pole is also
> pretty easy to build, and you can just drive the leftover 3/4" pipe
> into the ground to make a (short) mast that will also act as a ground
> in the right soil.

A word about interference ... the bigger and taller your antenna is, the LESS likely you are to interfere with other equipment. If you don't have a problem with the rubber ducky, you won't have a problem with the outside 1/4 wave. It will be farther away from the equipment you might interfere with, and if it is higher than the TV sets, it will prefer to radiate out horizontally, away from the TV's, phones, stereos, etc. The problem with a tall antenna is that it attracts the neighbor's attention, and suddenly every little ailment becomes your fault.

..

2646. Re: Looking for Three 1/4" flexible shaft couplers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 14:08:16 UTC
From: Gary Glaenzer <nobulltrans@mchsi.com>
Message-ID: <kjDr8.179474$Yv2.60602@rwcrnsc54>
Source record: 45088

"Geoffrey G. Rochat" <geoff777@777pkworks.com> wrote in message
news:a8lsm0$md4$1@news.utelfla.com...
>
> RalphE wrote in message ...
> > I am building an HF Amplifier and I am in need of Three , I am

>
> Check out Surplus Sales of Nebraska (www.surplussales.com),
> specifically:
>

I've already suggested that in an e-mail, I don't think he's listening to
any of the suggestions anyone has made so far.....................

G

2647. motorola radios

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 14:18:25 UTC
From: John Woolem <n5tkg@arrl.net>
Message-ID: <3CAF03B1.5977ED51@arrl.net>
Source record: 45089

I have two of these radios one with mounting bracket and one with out,
same with the power cords. Both are 25 watt radios uhf band, Standard
mic's no tones on these. Both are two channel radios model number is
D34LRA73A5BK
$225.00 shipped to your door. Both in good working shape no D.O.A.

--
N5TKG John Woolem
Assistant Section Manager For Central Ark

Message: Have you visited the Arkansas Section
Website at:http://www.all-arkansas-hams.org
Or the new ARRL/Arkansas Website at:
http://www.arrl.org/sections/?sect=AR

2648. Re: 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 14:34:33 UTC
From: Dave Holford <holford@sympatico.ca>
Message-ID: <3CAF0779.CE415B37@sympatico.ca>
Source record: 45090
Cross-posted to: sci.electronics.misc,rec.radio.amateur.homebrew

greenaum@BOLLOCKSyahoo.co.uk wrote:
>
> On Sat, 06 Apr 2002 10:39:14 GMT, smitjs@mweb.co.za (Johan Smit)
> sprachen:
>
> >If I recall correctly, there is an avaition band above the 88-108Mhz
> >band, with a decent interval between, so if I can be at 110-115Mhz, I
> >should be in the clear.

That will put you right in the aviation navigation band (108-118) and
aircraft within as much as 250 miles could suffer interference. I think
you could find yourself in a heap of trouble operating there!

Dave

2649. Re: Looking for Three 1/4" flexible shaft couplers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 14:54:08 UTC
From: leeann_tweeden@hotmail.com
Message-ID: <3cfa88b7.0204060654.66787c2@posting.google.com>
Source record: 45091

"RalphE" <k4ffa@comcast.net> wrote in message
news:<p69r8.233242$Gf.21520927@bin2.nnrp.aus1.giganews.com>...
> I am building an HF Amplifier and I am in need of Three , I am building an
> HF Amplifier and I am in need of Three 1/4" flexible shaft couplers for my
> capacitors and roller connections. These are the couplers that have a 1/4"
> collar on each side with a ceramic circle center to isolate the conductivity
> of the shaft.
>
> I have searched the web and every hamfest that I have been to since January
> and have not found any as of yet. I would appreciate it very much if any one
> can help me.
>
> Please reply to me direct. kb4i@comcast.net
>
> Please state price and condition.
>
> Thanks,
>
> Phillip Johnson KB4I
> Fairview, Tn

Try Ocean State Electronics, look for their online catalog.

2650. Re: QST XMAS 1952

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 15:36:55 UTC
From: "atec77(nospam)" <"atec77(nospam)"@hotmail.com>
Message-ID: <3caf1606$0$11448$afc38c87@news.optusnet.com.au>
Source record: 45092

use the money to get that caps key fixed thanks

Joeee1621 wrote:
>
> INCREDIBLY FASCINATING OLD MAG...JUST FOR THE COLLINS ADS ITS WORTH IT...$5
> SHIPPED.

2651. Re: Audio Transmitter schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 15:40:42 UTC
From: k7itm@aol.com
Message-ID: <3200347.0204060740.29ce1850@posting.google.com>
Source record: 45093

Amplitude or phase or frequency modulation? If PM or FM, what
deviation? Are you looking for a pre-built one, or just the
schematic?

Cheers,
Tom

"TiMe27" <time_@email.si> wrote in message
news:<a8m80t$m5g$1@nsnmrro1-gest.nuria.telefonica-data.net>...
> I lookig for Audio transmitter (mono) with modulator based on the Crystal
> oscilator and without pll loop.With filtering higher harmonics of crystal
> oscilator !!
>
> TiMe

2652. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 16:04:54 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0204060804.4c783aec@posting.google.com>
Source record: 45094
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3CAE3E31.40EB@pop.removethistomailme.net>...
> Mike Monett wrote:

> > Have you had a chance to look at crosstalk and spurs? If so, do you
> > see much difference between the pcb and the original?

> The PCB's broadband noise floor seems to be a couple dB worse, but
> in-band noise appears to be pretty much the same.
> http://209.95.122.40/jm/compare.gif shows an early prototype (not the
> same as the ADF4112-based unit on my web page) in purple, with the new
> PCB in blue.
>
> The open point-to-point layout of the prototype has less broadband noise
> (presumably from the digital section), but it's picking up 15.7 kHz junk
> from a TV in a neighboring apartment. The PCB has better self-shielding
> properties but also worse intra-circuit coupling. Not unexpected.

[...]

Not bad at all. You did an outstanding job on the layout. Excellent work!

Best Regards, Mike

2653. Re: 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 16:09:40 UTC
From: c.a.m@nospam.blueyonder.co.uk
Message-ID: <267uauksqoss2d9lq9iad89d2fbv9nijqk@4ax.com>
Source record: 45095

You could always use a cheap set of wireless headphones - they operate on 864Mhz (aerials are small up their), you get a transmitter and headphones for around ï¿½30 here in the UK and will do 100 meters without adding any external aerials.

They are fm stereo so the sound quality is well good enough, take very little power too, all you'd need to add is a small audio amplifier (maybe) and a loud speaker to replace the headphone speakers.

Clive

2654. Synthesizer Spur Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 16:29:26 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <o67uau0ql3fs649b1m8d58dbj0ohaiaelg@4ax.com>
Source record: 45096

I've been working on a 500 KHz - 2 MHz, 1 KHz step synthesizer. I'm using a 74HC4046 VCO/Phase Detector. Reference frequency is 1 KHz, obtained from a 74HC4060 running with a 8192 KHz crystal and I'm using a 4059 parallel load divider, presently hard-wired for divide by 800 for experimentation. I'm using the Type II phase detector output of the '4046. Kvco is about 500 KHz/volt.

My loop filter looks like this:

```
[13] --- 100K --- + ------+--- [9]
| |
1.0uF = = 0.2uF
| |
\ Gnd
/
\ 10K
/
Gnd
```

[13] is pin 13 of the '4046, phase detector output
[9] is pin 9 of the '4046, vco frequency input

Here's the problem and the associated question:

The loop locks up and sounds reasonably good on a receiver when listened to in USB or CW mode. However, the 1 KHz reference spurs are only about 60 dB down from the carrier (measured 25 KHz from the carrier) and they go out forever (to well over 100 MHz). My spectrum analyzer has a minimum resolution of 1 KHz, so I can't measure much closer than +/- 10 KHz or so to the carrier at a -60 dB level. Construction technique is Manhattan-style, so it has a decent ground reference. Vcc is decoupled with 0.1uF caps and ferrite beads for each IC.

The questions are: With the relatively simple RC loop filter, should I see better reference spurious supression, or is 60 dBc as much as I should expect? Or, is the limiting factor the 4046? Or, should I go back to more work on the RC filter? (I've already improved the 1 KHz rejection from an initial 35 dB by "fine tuning" the loop filter from my initial values.) Should I be looking at an active integrator with an op amp? This is the first synthesizer I've built, so I'm traveling down a new road.

By the way, the ultimate idea here is a 100 mW AM broadcast band transmitter, so that I can pipe various audio signals around the house via AM BC receivers. -60 dBc spurs are (barely) acceptable for this

purpose, but I'd rather have it look cleaner.

Jack K8ZOA

2655. Draw Schematics??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 16:58:42 UTC
From: Edward2001 <Edward2001@peoplepc.com>
Message-ID: <3CAF2942.D947C12D@peoplepc.com>
Source record: 45005

Awesome draw routine!!! Cheap too!!
http://www.fncwired.com

2656. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 18:22:40 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CAF3D0B.897@pop.removethistomailme.net>
Source record: 44997
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Falk Brunner wrote:
>
> ???? Shouldnt a well designed PCB have better intra-circuit coupling? The
> flying wires of the prototype should pick up much more (digital) noise than
> the (hopefully) well layouted PCB. Did you measure both version inside a
> metal box (shielding)?.

No, both of these graphs were taken with the board sitting on the
bench. I should clarify: the cleaner "prototype" version had no digital
circuitry at all associated with it (except for the counters and latches
on the PLL chip itself). Its reference was either a fairly-clean
external signal generator (HP8662a). By comparison, the PCB has the
deck stacked against it because all of the circuitry including the DDS
reference is on one small board.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2657. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 18:29:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CAF3E87.7846@pop.removethistomailme.net>
Source record: 44998
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike Monett wrote:
>
> Not bad at all. You did an outstanding job on the layout. Excellent work!
>

Yep, that's all Richard's doing. He turned a bunch of incoherent
paragraphs ("Connect the filter output through a T36-1 transformer to
the comparator's inverting input with a 0.1uF cap, bias the input to
1/2 Vcc with a couple of 100-ohm resistors, and use the same DC level as
a reference on the non-inverting input with a 1K/10 uF RC filter") into
an awesome board design.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2658. Re: Looking for Three 1/4" flexible shaft couplers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 18:43:38 UTC
From: RalphE <k4ffa@comcast.net>
Message-ID: <7kHr8.146723$VJ1.12179394@bin3.nnrp.aus1.giganews.com>
Source record: 44999

G,

What makes you think that I am not listening or checking out all the sources each has mentioned? I have diligently searched and checked all sources and may have found some items that will work.

I do enjoy reading the news group, but I don't think I need to be bashed by someone who thinks they know what every person is doing on the net.

Also, I do appreciate all the help from the group and hope you all have good rest of the day.

Thanks.

Phillip Johnson KB4I
Fairview, TN

>I've already suggested that in an e-mail, I don't think he's listening to
> any of the suggestions anyone has made so far.....................
>
> G
>
>
>
>
>

2659. Re: Synthesizer Spur Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 19:01:21 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CAF461C.1D6F@pop.removethistomailme.net>
Source record: 45000

Jack Smith wrote:
>
> The loop locks up and sounds reasonably good on a receiver when
> listened to in USB or CW mode. However, the 1 KHz reference spurs are
> only about 60 dB down from the carrier (measured 25 KHz from the
> carrier) and they go out forever (to well over 100 MHz).

The thing that concerns me is that you don't know how strong the spurs are at a 1 kHz offset. Reference spur levels are usually quoted at an offset equal to the reference frequency itself. If you have a rig with a narrow CW filter, you can use it to get an idea of how bad things are close to the carrier.

Also, I don't understand why they're extending to 100 MHz... are you using a good RF-grade capacitor for C2?

One problem is that your reference frequency is relatively low. A simple RC loop filter can't be expected to attenuate it very effectively, unless you drop your loop bandwidth even farther. If you can move to a 10 kHz reference, things should get a lot better. No need for 1 kHz tuning steps on the broadcast band, right?

Another option is to construct a notch filter specifically tuned to 1 kHz and hope it doesn't destabilize your loop by introducing too much additional phase shift at frequencies where your loop gain is still >1. I'm a little concerned that your loop is already unstable, though, because you should not be seeing anything at 100X the carrier frequency.

> The questions are: With the relatively simple RC loop filter, should I
> see better reference spurious supression, or is 60 dBc as much as I
> should expect?

-60 dBc is reasonable reference rejection for most purposes (as an example, the purple graph at http://www.qsl.net/ke5fx/synth/medium.gif shows -65 dBc reference spurs in an Icom rig with a 5 kHz reference frequency), but the key is, there should really only be one set of reference spurs at offset=+/- Fref. A whole forest of spurs usually means oscillation.

You might check out http://www.national.com/appinfo/wireless/ -- they have a nifty web-based PLL design program based on Dean Banerjee's work. It's geared to their PLLatinum chip line but can be used if you know your 4046's analogous specs. You can run a Bode plot to check your stability. That 0.2 uF cap across your VCO might be a bit much, for instance.

> Or, is the limiting factor the 4046? Or, should I go
> back to more work on the RC filter? (I've already improved the 1 KHz
> rejection from an initial 35 dB by "fine tuning" the loop filter from
> my initial values.) Should I be looking at an active integrator with
> an op amp? This is the first synthesizer I've built, so I'm traveling
> down a new road.

The 4046 is fine for this purpose, and you should use an active filter only when you need voltage gain -- for instance, if your VCO needs 1-20V to tune it but your PFD charge pump only puts out 0-5V. You're already driving a load (the VCO) with a very high impedance at the filter's operating frequency, so all an op-amp is likely to do is give you more noise.

> By the way, the ultimate idea here is a 100 mW AM broadcast band
> transmitter, so that I can pipe various audio signals around the house
> via AM BC receivers. -60 dBc spurs are (barely) acceptable for this
> purpose, but I'd rather have it look cleaner.

Right, -60 dBc is fine at a 1 kHz offset, but not at 25X the reference frequency. Your first step should be to move to a 10 kHz reference, where your analyzer can give you a clear picture of what's really happening.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2660. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 19:03:26 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CAF4699.4604@pop.removethistomailme.net>
Source record: 45001
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Miles wrote:
>
> Its reference was either a fairly-clean
> external signal generator (HP8662a)...

... or a separate, shielded and filtered DDS source. I don't remember which (and it doesn't matter, they're both about the same in terms of noise).

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2661. Re: Audio Transmitter schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 20:02:02 UTC
From: TiMe27 <time_@email.si>
Message-ID: <a8nk7ocod1@nsnmrro1-gest.nuria.telefonica-data.net>
Source record: 45002

I looking for schematic of FM modulation - deviation 15kHz and operatin
range of about 100 m.

So i need schematic that i can see the design and can i make some
modifikation for my personal use !!

"Tom Bruhns" <k7itm@aol.com> wrote in message
news:3200347.0204060740.29ce1850@posting.google.com...
> Amplitude or phase or frequency modulation? If PM or FM, what
> deviation? Are you looking for a pre-built one, or just the
> schematic?
>
> Cheers,
> Tom
>
> "TiMe27" <time_@email.si> wrote in message
news:<a8m80t$m5g$1@nsnmrro1-gest.nuria.telefonica-data.net>...
> > I lookig for Audio transmitter (mono) with modulator based on the
Crystal
> > oscilator and without pll loop.With filtering higher harmonics of
crystal
> > oscilator !!
> >
> > TiMe

2662. Re: Yaesu FT-101 and Fox-Tango mods

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 20:33:14 UTC
From: AB Brown <abbrown@nospammail.com>
Message-ID: <a8nm0k$7j3$1@nntp9.atl.mindspring.net>
Source record: 45003
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

>
> yes, it was some silly notes about improving FT-101 using MC1496P and
> this was the reason for buying FT101B, but it later turned out that
> MC1496P has an IP3 of -20dBm which would not be an improvement at all

Yes, I think I agree here. In fact, upon re-reviewing the Newsletters, someone mentioned that the original MOSFET's were actually better than the 1496 in most cases. Good point! However, not to sound like I'm contradicting myself, I have an unused 1496 sitting here along with parts boxes with all the parts needed to construct the mixer. I think I'll try it anyhow and see what happens. The receive is weak on the higher bands, especially 10 meters, and the bleed from close stations is terrible. I need to try something.

>
> Have borrowed several FT-Newsletters from DK3UZ to look at possible
> improvements for FT-7 and FT-902, but didn't find anything useful,
> most of the mods were more based on feeling than based on practical
> experience

I'm not sure what opinion I have of the Newsletters at this point. Seems like a lot of experiments were tried and failed but others were successful. And at least some of the content does seem theoretical rather than "practical".

AB

>
> 73,
> LA8AK
> --
> remove ,xnd to reply

2663. Re: Synthesizer Spur Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 22:09:39 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <14ruau8hnvoj0k3i4u6jpm03caskb480s2@4ax.com>
Source record: 45004

John:

Good suggestions. Here's what I've found:

(1)You will find a couple of scope shots accompanying the following discussion at http://home.cox.rr.com/k8zoa/Synthesizer.htm

(2) I moved the reference tap to 8 KHz, and rewired the jam inputs to the 4059 to divide by 100, thereby returning to the 800 KHz test frequency. (I didn't have a crystal that yielded 10 KHz with the 4059.)

This changed the loop filter parameters, so I resorted to the old "replace the fixed R's with pots and adjust until the results look better." The R values are a lot different, series R was 100 K, now 2.3K, damping R was 10K, now 250 ohms.

By adjusting the two resistors, I was able to get the phase detector output "kicks" to have a clean damped response without ringing. (If I squint a bit, though, there looks to be a periodic signal buried in the noise. I don't trust the "1.96 KHz" C1 auto measurement.)

(3) The results look a LOT better than with the 1 KHz reference frequency. Still not quite where it should be, but it looks more like a synthesizer than a broadband quasi random noise generator.

(4) I thought about 10 KHz steps but decided that it would be much more flexible with 1 KHz steps. But, the results are so much more promising with 8 KHz steps that I will give up on the 1 KHz idea.

(5) As you can see from the scope shot, I'm seeing quite a bit of noise on the VCO steering line. I'm not sure if this is normal or something of concern.

(6) As you can see, I can now resolve the first sidebands and they are 44 dB below the carrier.

(7) Also, the wider span shot shows the higher order spurs do roll off (albeit slowly), unlike what I was seeing with a 1 KHz reference.

(8) I did see the National App Note and built an Excel spreadsheet a couple days ago to implement the calculations. When I tried to implement the resultant design, I found that any capacitance at the output of the phase detector (even as little as 33 pF) caused severe loop oscillation. I also found the simplified technique in the Fujitsu app note of some help as well.

I have all of the required constants (Kvco = 415 KHz/volt, based on measurements and curve fitting) except the charge pump output on the 74HC4046. In terms of voltage, it swings Vcc for 4xpi radians. I believe that translates to around 5 mA for 4 PI radians, based on the short circuit output current of a logic gate in the 74HC4046, but I'm not 100% comfortable with that conversion.

Jack K8ZOA

2664. Reading a Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-06 23:30:49 UTC
From: KG4KLR <kg4klr@arrl.net>
Message-ID: <a8o0f9$m7v$1@news.utelfla.com>
Source record: 45006

I have built a few kits and am now trying to do a homebrew project from something I found on the ARRL website. It's an oscillator so you can do modulated CW on 2m FM.

I have the schematic, all of the parts listed, but how do I transcribe the schematic to the board? Where do I even begin?

73
KG4KLR

2665. Re: Antenna for 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 00:06:45 UTC
From: "Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net>
Message-ID: <942712E2D2461160.48B8C5C71CB9AF66.118C5F60CF635554@lp.airnews.net>
Source record: 45007

On Sat, 6 Apr 2002 08:38:55 -0500, "xpyttl"
<xpyttl_nospam@earthling.net> wrote:

>A word about interference ... the bigger and taller your antenna is, the
>LESS likely you are to interfere with other equipment. If you don't have a
>problem with the rubber ducky, you won't have a problem with the outside 1/4
>wave. It will be farther away from the equipment you might interfere with,
>and if it is higher than the TV sets, it will prefer to radiate out
>horizontally, away from the TV's, phones, stereos, etc. The problem with a
>tall antenna is that it attracts the neighbor's attention, and suddenly
>every little ailment becomes your fault.

Actually, my j-pole is in the flowerbed outside my first floor
apartment, with the bottom T about 4ft from the ground. It hardly
interferes with the TV, much less the computer speakers. Both fall
victim to RFI when I use the quarterwave that close.

Joe Bramblett, KD5NRH
kd5nrh@kd5nrh.net
http://www.kd5nrh.net

2666. Re: 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 00:13:30 UTC
From: "Joe Bramblett, KD5NRH" <kd5nrh@kd5nrh.net>
Message-ID: <7EA8B58BACE876C8.38A680FAFDD36E8C.1AE3FE1FEBDC75D3@lp.airnews.net>
Source record: 45008
Cross-posted to: sci.electronics.misc,rec.radio.amateur.homebrew

On Sat, 06 Apr 2002 10:38:37 GMT, smitjs@mweb.co.za (Johan Smit)
wrote:

>>Well, since you're just sending audio, why not just use FRS, or
>>whatever the local equivalent is? A couple of single channel units
>>would work fine at 100m LOS, and most already have audio input/output
>>jacks on them for connecting the CD player and a small amplified
>>speaker.
>>
>Hi Joe,
>What are you talking about please?

IIRC, the European version is called PMR446 or soemthing similar.
Basically, it's the cheap UHF walkie talkies designed for families to
keep in touch over short (about a mile in most outdoor conditions)
distances. The American FRSs work on 14 channels in the 462-467MHz
range, and cost between US $15 (For single channel toys) and $70
(Fancier ones with FM broadcast receive, weather alert, and whatever
else could fit into the case) I have no idea what the price range or
specification for the European version is.

Joe Bramblett, KD5NRH
kd5nrh@kd5nrh.net
http://www.kd5nrh.net

2667. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 00:26:45 UTC
From: Michael Hart <mhart-nospam@terrigal.net.au>
Message-ID: <3caf9241@daisy.ans.com.au>
Source record: 44948

Martin Wehner <martin@cyclotomic.com> wrote in message
news:3CA8F998.36D619D5@cyclotomic.com...
> Hello All-

[snip]

> Question #5: I am a bit confused as to what the power-ratings for radios
> mean.
> If I say I am transmitting at 5W power, what does that really mean? Does
> the standard: P=V*V/R still hold? In the standard case of dealing with a
> 50 Ohm antenna, does that mean my final amplifier is outputting a
> voltage of +/- 15.81V across the antenna terminals?
> Does that mean that you may have hundreds of volts across the terminals
> for higher-power transmitters? How do you obtain these voltages? Would
> you use a transformer and then connect the antenna terminals directly to
> the transformer? Or does your actual power-supply have to supply these
> voltages?

Yes - High power means high voltages in the RF circuits. You will see large air spaced capacitors in high power tuners for this reason.

Transmitters use impedance matching to match the relatively low impedance of the transistor output to the higher antenna impedance. Impedance matching changes the currents and voltages at the input and output to match what is driving it (the final transistor/valve in the transmitter) to what is being driven (the antenna) without loss of power.

For wideband HF amplifiers this impedance matching is can be done using wound transformers as you suggest. Other methods are also used such as tuned coupling (eg PI coupling) or stipline impedance changes at higher frequencies. Take a look in the plate / collector circuit in RF power amplifiers in the ARRL handbook you have.

The power supply needs to supply only the correct voltage to drive the transistor/valve you are using.

2668. Re: Yaesu FT-101 and Fox-Tango mods

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 00:34:53 UTC
From: la8ak.xnd@online.no
Message-ID: <3caf5be2.160626512@news.online.no>
Source record: 45009
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Sat, 6 Apr 2002 15:33:14 -0500, "AB Brown" <abbrown@nospammail.com>
wrote:

>>
>> yes, it was some silly notes about improving FT-101 using MC1496P and
>> this was the reason for buying FT101B, but it later turned out that
>> MC1496P has an IP3 of -20dBm which would not be an improvement at all
>
Wasn't it the so-called VK-blop - as mentioned by G3VA in TT/Radcom..

>Yes, I think I agree here. In fact, upon re-reviewing the Newsletters,
>someone mentioned that the original MOSFET's were actually better than the
>1496 in most cases. Good point! However, not to sound like I'm
>contradicting myself, I have an unused 1496 sitting here along with parts
>boxes with all the parts needed to construct the mixer. I think I'll try it
>anyhow and see what happens. The receive is weak on the higher bands,
>especially 10 meters, and the bleed from close stations is terrible. I
>need to try something.
>
I've used douzens for MC1496P and MC1596P for several projects, also
S042P, but it is better devices around. Just got some SL6440, and they
have high IP3, so I don't understand a reason for using a bad device

In fact I don't see any point to waste time on FT-101/B or FT-221 or
FT-225 which are all made to same principles and suffers from bad
carrier oscillator leakage which upset AGC,. So without any chance of
good audio quality it is no point to waste the time,....but somebody
had a point: "It is a good transmitter". I usually prefer to hear what
the opposite stations says, but it is different opinions about that

I spent a week trying to find the reason for the problem with FT-101B,
but never succeeded, later tried it with FT-221, and withing a week I
managed to make only very inferior improvements. Although I had very
sensitive RF voltmeter available I couldn't trace what really caused
this radiation of carrier signal from the oscillator to an early stage
of IF, og possibly RF mixer. You can remove the carrier connection to
the product detector and still receive ssb signals as normal.

>>
>> Have borrowed several FT-Newsletters from DK3UZ to look at possible
>> improvements for FT-7 and FT-902, but didn't find anything useful,
>> most of the mods were more based on feeling than based on practical
>> experience
>
>I'm not sure what opinion I have of the Newsletters at this point. Seems

>like a lot of experiments were tried and failed but others were successful.
>And at least some of the content does seem theoretical rather than
>"practical".
>
it was also a discussion concerning replacing diodes in product
detector to reduce noise. I never really understood what was the
point, it seems ridiculous to me.

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

2669. Re: 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 02:02:33 UTC
From: Mark <mark@lineisp.com>
Message-ID: <bPNr8.5838$bu5.874054@news6-win.server.ntlworld.com>
Source record: 45010
Cross-posted to: sci.electronics.misc,rec.radio.amateur.homebrew

"Dave Holford" <holford@sympatico.ca> wrote in message
news:3CAF0779.CE415B37@sympatico.ca...
>
>
> greenaum@BOLLOCKSyahoo.co.uk wrote:
> >
> > On Sat, 06 Apr 2002 10:39:14 GMT, smitjs@mweb.co.za (Johan Smit)
> > sprachen:
> >
> > >If I recall correctly, there is an avaition band above the 88-108Mhz
> > >band, with a decent interval between, so if I can be at 110-115Mhz, I
> > >should be in the clear.
>
> That will put you right in the aviation navigation band (108-118) and
> aircraft within as much as 250 miles could suffer interference. I think
> you could find yourself in a heap of trouble operating there!
>
> Dave

Unless VOR et al has become suddenly a bit more sensitive of late, I would be a little surprised if 50mW would cause interference 250 miles away. Shag, one transmitter the size of a pack of fags could take out the entire UK nav system (and France / Ireland for good measure). I have enough drama getting the local beacon at Daventry when I'm more than a a few dozen miles away - and that's with a pretty good line of sight and with Daventry putting out a bit more than a twentieth of a watt, It's also with equipment designed for the job.

That said, I would tend to agree that transmitting on Aircraft freq's is a pretty silly move.

In the dim and distant past, I always worked on the basis that 100 Mhz on the nail was a good one to transmit on if you WERE going to transmit illegally. So many devices emit RF at 100 Mhz unintentionally that I have never heard of ANYTHING critical being used on that frequency. Certainly I would not anticipate national calamities occuring with 50mW on said frequency.

The little transmitters from Veronica are actually quite "clean" as far as it goes, in fact they also make "proper" transmitters which are acceptable for use in the UK with licenced operators. Even the "toy" ones are quite well designed.

I would say the nearest neighboiur is more likely to get uptight about rifle shots in the night than anything else. :)

Mark

2670. Re: Antenna for 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 02:20:12 UTC
From: Martin Wehner <martin@cyclotomic.com>
Message-ID: <3CAFACDC.F6E0E327@cyclotomic.com>
Source record: 45011

Hello Everyone-

I'd like to thank every one of you who took the time to reply to my inquiry. I greatly appreciate all of your help and input.
I went to a couple of stores today to get the necessary hardware and built my first antenna: I decided to go with the 1/4 lambda ground-plane verticle listed in the ARRL Handbook and mounted it on a PVC pipe in my backyard.
The signal reports I have gotten so far were all outstanding. I am also able to make a repeater that I could never get into before, so it seems like everything is working out great.

Thanks again to everyone for your input & support!
73's

Martin

Martin Wehner (KG6KLF)

e-mail: <martin@cyclotomic.com>
web: http://www.cyclotomic.com/~martin

2671. Re: Antenna for 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 02:42:12 UTC
From: mcalhoun@ksu.edu
Message-ID: <a8obm4$g02@unix1.cc.ksu.edu>
Source record: 45012

>>>(4) Do I need a balun for the antenna if fed with coax?
>>I've never bothered. SWR on mine is easily adjusted to 1:1, and....
>There are baluns and there are transformers. Baluns don't have anything to
>do with SWR. If you have an unbalanced feedline (coax) and an unbalanced
>antenna (1/4 wave) then a balun is irrelevant. With an antenna impedance
>reasonably close to 50 ohms (OK, a vertical isn't exactly 50 but it's close
>enough for engineering purposes)....

Doesn't "drooping" the radials on a vertical cause the impedance to
approach 50 ohms?

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

2672. Re: Antenna for 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 03:42:44 UTC
From: w9wi@linux1.localdomain
Message-ID: <slrnaavg7k.8vo.w9wi@linux1.localdomain>
Source record: 45013

On Sat, 06 Apr 2002 18:20:12 -0800, Martin Wehner <martin@cyclotomic.com> wrote:
>Hello Everyone-
>
>I'd like to thank every one of you who took the time to reply to my
>inquiry. I greatly appreciate all of your help and input.
>I went to a couple of stores today to get the necessary hardware and
>built my first antenna: I decided to go with the 1/4 lambda ground-plane
>verticle listed in the ARRL Handbook and mounted it on a PVC pipe in my
>backyard.
>The signal reports I have gotten so far were all outstanding. I am also
>able to make a repeater that I could never get into before, so it seems
>like everything is working out great.

Congratulations! - great to hear it's working.

Take a shot at 146.52 simplex. (whether it does any good is very dependant
on local activity..) That'll *really* prove the antenna...
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

2673. IS FIELD DAY YOUR FAVORITE?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 03:48:58 UTC
From: joeee1621@aol.com
Message-ID: <20020406224858.00564.00003545@mb-md.aol.com>
Source record: 45014

JUNE 1956 QST COVER IS "PODUNK HOLLOW RADIO CLUB 56 FIELD DAY SETUP" ENTIRE ISSUE IS DEDICATED TO FIELD DAY. JULY 1956 QST COVER IS "PODUNK HOLLOW RADIO CLUB 56 FIELD DAY TEAR DOWN" THESE 2 ISSUES OF QST ARE CLASSICS AND MUST HAVES FOR ANY FIELD DAY LOVER...BOTH ISSUES $8 SHIPPED...TAKE THEM WITH YOU TO YOUR FIELD DAY

2674. Texscan Spectrum Analyzer info needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 04:20:40 UTC
From: "Donald E. Smith" <desmith@innercite.com>
Message-ID: <3CAFC918.DFD6ACF@innercite.com>
Source record: 45015
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap,sci.electronics.repair

I am in need of information for a part on my Texscan AL-51 Spectrum Analyzer. The 1 to 2 ghz oscillator is dead and I traced the problem to a stack of four tuning (vericap) diodes with a part number of MDT606. I have not been able to locate the part number or a cross reference to this part. Might anyone out there have information on the defective part; or perhaps an extra part (or even the oscillator module itself)? Gladly pay reasonable costs. Please respond to my email address. Thanks and 73's Don Smith KB6GQA

2675. Spring cleaning

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 06:31:47 UTC
From: sparky@cet.com
Message-ID: <3cafe780.11692324@news.cet.com>
Source record: 45016
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Cleaning up the shop and here's a pile of junk that's collecting dust.
Email me with any questions or if you need a pic. I may trade all or
part for a decent HF general coverage receiver. Whatever the offer,
any personal checks must clear before I ship.

==========

* Jackson 640 signal generator, connectors replaced with BNC's;
* Heathkit IG-72 audio signal generator;
* Hickok model 121 (cardmatic) tube tester, includes cards for 322
tubes, approx 50 lbs;
* O-scope, Telequipment model S54A (doesn't work, no power); 20 lbs;
* Power transformer, Marantz. 8VAC, 68.5VAC, 73VAC (low current),
should easily power a 300W audio amp; 17 lbs;
* Power transformer from ARC PS; 117VAC 7 step primary; secondaries:
315 - 415VAC; 66.0 - 86.4VAC/CT; with matching chokes, and with cap
for LV winding; total weight 15 lbs;
* Transformer: Originally a power splitter/isolation transformer,
230VAC @ 15A max input, two 115VAC outputs. Secondaries removed
(they were cooked). Primary on bobbin is estimated 248 turns of
BWG#11, and ready to wind a new secondary to your specs. Core
consists of four laminated U-cores that could easily be gapped.
Whole thing is easy to assemble and mounts in a steel box, approx
10" cube, w/carrying handle; total weight approx 40 lbs.
* DY-9/ARC-1 Dynamotor, 8 lbs.
Input 26VDC @ 4.0A, output 360 VDC @ .135A continuous,
Input 26VDC @ 7.5A, output 310 VDC @ .355A intermittant;
* Carter DuoVolt Genemotor, Code No 6427VBNS, 13 lbs.
Input 6/12 VDC @ 51/25.5A,
Output 640 VDC @ .275A,
Intermittant duty, originally powered 6146 pair;
* One 15# spool of #26 enameled wire (bobbin adds 5 lbs to spool);
* One 1000' spool of Belden 9311 (RG-58A/U);
* JVC model 3050, AM/FM/PB, 3" B/W TV, w/AC adapter, only defect is
the antenna tip broken off;

==========

The following is a bunch of parts that were mostly scrounged from dead
radios. Some are real antiques. The parts will be sold as a lot. A
small goldmine for the homebrewer:

* Several dozen pots, rotory and slide types;
* A couple dozen tube sockets, octal & min, a few ceramics;
* 31 large crystal sockets, 19 ceramic;

* Small box of vari-caps, up to 400pF, air & mica, many trimmers;
* Large homemade dual vari-cap (seperate shafts, and pretty well made), 400pF each section, 1/8" plate spacing;
* A few small audio & power transformers, most specs unknown;
* A small box of selenium rectifiers, specs unknown;
* One dozen meters, a couple larger ones too;
* A bootboxful of various coils, switches, knobs, assemblies, etc;
* Hundreds of tubes, all pulls. Several shoe-boxes full of miniatures, some compactrons, and here's a list of everything else that I'm willing to part with:

1A7 1Q5 1N5x2 6A7 6AC7x2 6BG6 6BQ6GA/6CU6
6D6 6F6-G 6H6 6Q7-G 6SA7-GT 6SK7 6SL7-GT
6SN7-GTA 6SQ7-GTx2 6V6-GTx5 6146x4 6146B 12DQ6
12JB6A 12SL7-GT 41 80 7984x2 4X150Ax2

End of parts lot. I have other parts in the shop if you can think of anything specific that I can add to the lot, like chips, connectors, crystals, etc. I will not add any RF power transistors or any more tubes, so don't ask!

2676. Re: Reading a Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 08:19:21 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3CB00167.36BB5A67@ay.com.au>
Source record: 45017

KG4KLR wrote:
>
> I have built a few kits and am now trying to do a homebrew project from
> something I found on the ARRL website. It's an oscillator so you can do
> modulated CW on 2m FM.

Do you have the URL so I can take a peek?

> I have the schematic, all of the parts listed, but how do I transcribe the
> schematic to the board? Where do I even begin?

I usually start out with a pencil and paper, drawing the aproximate
size of the parts, and follow the diagram for layout hints, most are
drawn as you would build the circuit. Graph paper is handy for a neat
layout.

Humans are much better than auto-routers, but there is software out
there that will do this automagically for you, and they scale a hell of
a lot better.

Most HAM projects are small enough to do by hand, if the circuit is
simple enough you can just build it dead-bug or manhattan style, the
stray C is probably still OK at the mid VHF of 2m, otherwise you can try
perf board with no copper and solder in pieces of copper or tin as
required for large grounding areas.

--
Alan Yates
http://www.vk2zay.net/

2677. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 08:59:31 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3cb008e0$0$544@echo-01.iinet.net.au>
Source record: 45018
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message
news:3CAEB6D8.5325@pop.removethistomailme.net...
> Richard Hosking wrote:
> >
> > John
> > Would shielding sections of the board and/or separating parts of the
ground
> > plane make any difference?
> > Also the close in phase noise of the ICOM LO was much worse but the
noise at
> > 10 KHz was much better than the point to point version. Was this due to
loop
> > filter design or could you identify some other reason - eg VCO
performance
> > etc?
>
> As I noted in my earlier reply (to Mike Monett?), the Icom's strength is
> its twin-discrete VCO design. They use a very low loop bandwidth, less
> than 100 Hz as far as I can tell, and much higher-quality VCOs that
> cover only half the range (770-1290 MHz as opposed to 1000-2000). There
> is no way to make an inexpensive off-the-shelf integrated VCO compete
> with theirs -- I'm doing well to get as close to their performance as I
> am.
>
> It's possible that some type of shielding arrangement could buy another
> dB or so in the broadband noise arena, but I doubt it would be worth it.
>
> -- jm
>
On the loop bandwidth issue, it is my understanding that the PLL will
attenuate VCO phase noise within the loop filter bandwidth. If the ICOM has
a very low loop cutoff, that might explain why the close in phase noise is
worse than our synthesizer. On the other hand phase noise on ours is worse
at 10 KHz - this presumably reflects the VCO fundamental phase noise
performance. Would it be worth setting our loop filter cutoff to as high a
frequency as possible, consistent with adequate attenuation of the reference
sidebands? In our case the reference freq is about 1.7 MHz. With a loop
cutoff of Fref/50 (this is a reasonable assumption for a quasi 2nd order
loop), this would allow a cutoff of 25-30 KHz or so.Phase noise would be
attenuated within this bandwidth by the loop filter.(I think)
On a related issue, is it worth considering a discrete loop amplifier,
rather than opamp? It is certainly possible to get lower noise with
discrete components while retaining the higher VCO control voltage swing

Richard

2678. Re: Reading a Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 10:32:10 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0204070232.57630b8e@posting.google.com>
Source record: 45019

"KG4KLR" <kg4klr@arrl.net> wrote in message news:<a8o0f9$m7v$1@news.utelfla.com>...
> I have built a few kits and am now trying to do a homebrew project from
> something I found on the ARRL website. It's an oscillator so you can do
> modulated CW on 2m FM.
>
> I have the schematic, all of the parts listed, but how do I transcribe the
> schematic to the board? Where do I even begin?
>
> 73
> KG4KLR
See if that project has templates to make a printed circuit board.
Many do I think. If not, you will have to design your own board
layout, or use wire wrap, etc. If they do have a template, you can buy
kits to make boards, or you could have it made. Simple boards are easy
to make. They sell marker pens to draw the traces out, but I don't
like those too much. They always seem to leak through a bit and have
trace gaps, etc. I like to use thin strips of tape to draw the traces
on a simple board as it has less problems with trace breaks. MK

2679. Re: Yaesu FT-101 and Fox-Tango mods

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 11:31:40 UTC
From: Ned Collins <lucille@gofree.indigo.ie>
Message-ID: <96Wr8.5746$e5.34255@news.indigo.ie>
Source record: 45020
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hi All,

Technial Topics in Radcom (RSGB) covered the problems of FT101 and strong signals and also offered a solution that I carried out and found to be very effective on my FT101B.

Details are August 1979 P739 & October 1979 P938.

Further details on request.

73's de Ned/EI5DS

2680. noise generator: how to silence down a TV receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 12:00:26 UTC
From: Luca Ciastellardi <lucaaah@libero.it>
Message-ID: <3CB034DA.E49D1FA1@libero.it>
Source record: 45021

I know i am going to stir up some trouble. Please forgive me, i would not start it if i didn't need it.
I have a crazy neighbour that plays very loud TV during night time, all night.
Since she is crazy the Police cannot do anything.
I am looking for a short range (50 meters are enough) noise generator that could erase her annoying noises (white noise is quite more acceptable).
I tried to use a couple W at 430 MHz close to her TV antenna but, with my greatest surprise, nowadays TV are quite selective and this did not do the trick.
Can anyone help me? Technically it looks to me like a big challenge, since the spectrum is so wide.

Thanks
lucaaah@hotmail.com

2681. Re: Pulling HC-49 Crystal in Super VXO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 13:14:34 UTC
From: la8ak.xnd@online.no
Message-ID: <3cb043f1.220042289@news.online.no>
Source record: 45022

Some years ago xtal testers seem to be interesting projects, and several circuits were described in the magazines for handy tester you could bring with you when you were looking for surplus xtals, probably FT243 then.

Below is shown a simplified circuit for an xtal tester, this is just connected to my counter, and some xtals has been tested since the tuning capacitor is 150pF and will give some indication of xtal tuning ranges.
It seems that xtals made for colour burst oscillators may be pulled more than others, but otherwise xtals are pullable by a degree which rises with frequency, and channel xtals for VHF sets seem not less pullable than other xtals. The circuit is just an ordinary XO, not VCXO, but still xtals may have the required pull range for certain applications.

73
Jan-Martin
LA8AK
---

xtal tester and some xtals tested 2002.04.06 (LA8AK), save the message and read the following as txt-file:

```
|------10nF---|-------------|-----2k2---(+12Vcc)
| Variable 22k |
| 10-158pf | C BC238/BC547/2N3904
|---c1---X----|--|---|----B
--- | | E
gnd 22k 330pf |
| |------|--- 0.1pf---o/p
---- | |
gnd 150pF 2k2
(LA8AK) | |
XTAL ----------
Tester gnd
```

Circuit diagram for the xtal tester

xtals tested (type HC18=HC49 or HC25=HC50 when no remarks)

3686.4: 3686.18-3687.7, dF=1.5kHz
4194.304: 4193.96-4196.09, dF=2.1kHz
4434.61875: 4431.38-4435.69 (HC6U TV colour burst xtal), df=4.3kHz
6000: 6000.45-6003.32 NDK HC18, df=2.9kHz
6553.6: 6552.45-6557.81, df=5.5kHz

6506.25: 6504.5-6511.1 HC6/U, dF=6.5kHz
7864.32: 7869.32-7863.01, dF=6.3kHz
8000: 8001.67-8008.67, df=7kHz
9403.125: 9401.75-9408.67, df= 6.9kHz, HC6/U
10240: 10238.54-10246.08, df=7.5khz NDK HC18
11595.18: 11593.66-11601.28, df=7.5kHz, HC6/U
13352.08: 13350.34-13359.94, df=9.6
14318: 14317.75-14329.35, dF=11.6kHz, computer xtal
17645.80: 17643.26-17654.55, df=11.3kHz

--
remove ,xnd to reply

2682. Re: 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 14:10:40 UTC
From: Dave Holford <holford@sympatico.ca>
Message-ID: <3CB05360.17EB928E@sympatico.ca>
Source record: 45024
Cross-posted to: sci.electronics.misc,rec.radio.amateur.homebrew

Well I'm not inclined to do the math on a Sunday morning but more than one person using aviation bands for things like garge door openers has run afoul of the law in North America in the past. And, I understand that in at least one major city not too far from me there have been serious interference complaints due to those little remote car starer/lock controllers to the extent that some repeaters have actually changed frequencies to get away from them.

Dave

Mark wrote:
>
> "Dave Holford" <holford@sympatico.ca> wrote in message
> news:3CAF0779.CE415B37@sympatico.ca...
> >
> >
> > greenaum@BOLLOCKSyahoo.co.uk wrote:
> > >
> > > On Sat, 06 Apr 2002 10:39:14 GMT, smitjs@mweb.co.za (Johan Smit)
> > > sprachen:
> > >
> > > >If I recall correctly, there is an avaition band above the 88-108Mhz
> > > >band, with a decent interval between, so if I can be at 110-115Mhz, I
> > > >should be in the clear.
> >
> > That will put you right in the aviation navigation band (108-118) and
> > aircraft within as much as 250 miles could suffer interference. I think
> > you could find yourself in a heap of trouble operating there!
> >
> > Dave
>
> Unless VOR et al has become suddenly a bit more sensitive of late, I would
> be a little surprised if 50mW would cause interference 250 miles away. Shag,
> one transmitter the size of a pack of fags could take out the entire UK nav
> system (and France / Ireland for good measure). I have enough drama getting
> the local beacon at Daventry when I'm more than a a few dozen miles away -
> and that's with a pretty good line of sight and with Daventry putting out a
> bit more than a twentieth of a watt, It's also with equipment designed for
> the job.
>
> That said, I would tend to agree that transmitting on Aircraft freq's is a
> pretty silly move.
>
> In the dim and distant past, I always worked on the basis that 100 Mhz on

> the nail was a good one to transmit on if you WERE going to transmit
> illegally. So many devices emit RF at 100 Mhz unintentionally that I have
> never heard of ANYTHING critical being used on that frequency. Certainly I
> would not anticipate national calamities occuring with 50mW on said
> frequency.
>
> The little transmitters from Veronica are actually quite "clean" as far as
> it goes, in fact they also make "proper" transmitters which are acceptable
> for use in the UK with licenced operators. Even the "toy" ones are quite
> well designed.
>
> I would say the nearest neighboiur is more likely to get uptight about rifle
> shots in the night than anything else. :)
>
> Mark

2683. Re: Synthesizer Spur Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 14:11:36 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3cb05201$0$553@echo-01.iinet.net.au>
Source record: 45023

Do you need to have 1 KHz resolution? I thought the AM band spacing was 9 KHz. It will mean that your loop filter cutoff will have to be around 20 Hz to get acceptable reference suppression. I dont quite follow your loop filter - it looks as though there is R (100K) in series with the VCO control line with a damped C to ground (usual). However there is an additional C to ground without an R in series to make the filter 3rd order I presume. Trial and error is difficult with PLLs - whenever I have tried it I have ended up with oscillation. Better to model them and plug some values to a softrware program.

Richard

"Jack Smith" <jsmith@mnsinc.com> wrote in message news:o67uau0ql3fs649b1m8d58dbj0ohaiaelg@4ax.com...
> I've been working on a 500 KHz - 2 MHz, 1 KHz step synthesizer. I'm
> using a 74HC4046 VCO/Phase Detector. Reference frequency is 1 KHz,
> obtained from a 74HC4060 running with a 8192 KHz crystal and I'm using
> a 4059 parallel load divider, presently hard-wired for divide by 800
> for experimentation. I'm using the Type II phase detector output of
> the '4046. Kvco is about 500 KHz/volt.
>
> My loop filter looks like this:
>
> [13] --- 100K --- + ------+--- [9]
> | |
> 1.0uF = = 0.2uF
> | |
> \ Gnd
> /
> \ 10K
> /
> Gnd
>
>
> [13] is pin 13 of the '4046, phase detector output
> [9] is pin 9 of the '4046, vco frequency input
>
> Here's the problem and the associated question:
>
> The loop locks up and sounds reasonably good on a receiver when
> listened to in USB or CW mode. However, the 1 KHz reference spurs are
> only about 60 dB down from the carrier (measured 25 KHz from the
> carrier) and they go out forever (to well over 100 MHz). My spectrum
> analyzer has a minimum resolution of 1 KHz, so I can't measure much
> closer than +/- 10 KHz or so to the carrier at a -60 dB level.

> Construction technique is Manhattan-style, so it has a decent ground
> reference. Vcc is decoupled with 0.1uF caps and ferrite beads for each
> IC.
>
> The questions are: With the relatively simple RC loop filter, should I
> see better reference spurious supression, or is 60 dBc as much as I
> should expect? Or, is the limiting factor the 4046? Or, should I go
> back to more work on the RC filter? (I've already improved the 1 KHz
> rejection from an initial 35 dB by "fine tuning" the loop filter from
> my initial values.) Should I be looking at an active integrator with
> an op amp? This is the first synthesizer I've built, so I'm traveling
> down a new road.
>
> By the way, the ultimate idea here is a 100 mW AM broadcast band
> transmitter, so that I can pipe various audio signals around the house
> via AM BC receivers. -60 dBc spurs are (barely) acceptable for this
> purpose, but I'd rather have it look cleaner.
>
> Jack K8ZOA
>
>

2684. Re: noise generator: how to silence down a TV receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 15:10:17 UTC
From: Gary Glaenzer <nobulltrans@mchsi.com>
Message-ID: <tjZr8.184135$ZR2.98962@rwcrnsc52.ops.asp.att.net>
Source record: 45025

if she's on cable or satellite you're SOL

"Luca Ciastellardi" <lucaaah@libero.it> wrote in message
news:3CB034DA.E49D1FA1@libero.it...
>
> I know i am going to stir up some trouble. Please forgive me, i would
> not start it if i didn't need it.
> I have a crazy neighbour that plays very loud TV during night time, all
> night.
> Since she is crazy the Police cannot do anything.
> I am looking for a short range (50 meters are enough) noise generator
> that could erase her annoying noises (white noise is quite more
> acceptable).
> I tried to use a couple W at 430 MHz close to her TV antenna but, with
> my greatest surprise, nowadays TV are quite selective and this did not
> do the trick.
> Can anyone help me? Technically it looks to me like a big challenge,
> since the spectrum is so wide.
>
> Thanks
> lucaaah@hotmail.com
>
>
>

2685. Re: transformer inverts phase

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 15:33:49 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <ub0pn8ss7uf048@corp.supernews.com>
Source record: 45026

180 degrees difference in phase is not a delay but without sophisticated
equipment appears as a 180 deg. delay..
"Bob Lewis (AA4PB)" <rlewis@staffnet.com> wrote in message
news:uasg5gpu2k7d98@corp.supernews.com...
> > the input and output waveforms may be of the same polarity or of
> opposite
> > polarity, depending on which end of the winding is being used as a
> > reference, but to say it 'inverts phase' in not accurate (although
> commonly
> > used).
> >
> True - the only way to change phase is by creating a time delay in one
> of the signals.
>
>
>

2686. Re: transformer inverts phase

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 15:52:37 UTC
From: Gary Glaenzer <nobulltrans@mchsi.com>
Message-ID: <9XZr8.184301$ZR2.98973@rwcrnsc52.ops.asp.att.net>
Source record: 45027

"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:ub0pn8ss7uf048@corp.supernews.com...
> 180 degrees difference in phase is not a delay but without sophisticated
> equipment appears as a 180 deg. delay..

Henry;

By your use of '180 degrees difference in phase' you've used a common
incorrect description of what is actually going on.

You mean (I assume, since you qualified it with 'is not a delay') that
'opposite polarity appears to be a 180-degree phase delay'; this is true,
but only for a symetrical wave-form.

Take as an example a wave composed of the positive-going half of a sine wave
followed by the negative-going half of a sawtooth wave.

If you invert it (opposite polarity) we get a negative-going half-sine-wave
followed by a positive-going half-sawtooth

On the other hand, if we delay it 180 degrees, we get a negative-going
half-sawtooth followed by a positive-going half-sine wave.

This is one of those errors in terminology that have been perpetuated by
textbooks. instructors, and common usage which call it '180 degrees out of
phase' (incorrect, but indistinguishable for a symetrical waveform), when
they should have said 'of opposite polarity' (correct under any
circumstances).

Not criticizing, just trying to ascertain what your true meaning was, and
give an example to illustrate the difference.

Regards,

G

> "Bob Lewis (AA4PB)" <rlewis@staffnet.com> wrote in message
> news:uasg5gpu2k7d98@corp.supernews.com...
> > > the input and output waveforms may be of the same polarity or of
> > opposite
> > > polarity, depending on which end of the winding is being used as a
> > > reference, but to say it 'inverts phase' in not accurate (although
> > commonly
> > > used).
> > >
> > True - the only way to change phase is by creating a time delay in one
> > of the signals.
> >

> >
> >
>
>

2687. Re: Pulling HC-49 Crystal in Super VXO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 16:15:41 UTC
From: la8ak.xnd@online.no
Message-ID: <3cb05b6a.226052572@news.online.no>
Source record: 45028

Repost (found some more info):

Some years ago xtal testers seem to be interesting projects, and several circuits were described in the magazines for handy tester you could bring with you when you were looking for surplus xtals, probably FT243 then.

Below is shown a simplified circuit for an xtal tester, this is just connected to my counter, and some xtals has been tested since the tuning capacitor is 150pF and will give some indication of xtal tuning ranges.
It seems that xtals made for colour burst oscillators may be pulled more than others, but otherwise xtals are pullable by a degree which rises with frequency, and channel xtals for VHF sets seem not less pullable than other xtals. The circuit is just an ordinary XO, not VCXO, but still xtals may have the required pull range for certain applications.

73
Jan-Martin
LA8AK
---

xtal tester; Some xtals tested 2002.04.07 (LA8AK)
complete circuit diagram is available as gif file, and scanned photo as jpg-file

```
|------10nF---|-------------|-----2k2---(+12Vcc)
| Variable 22k |
| 10-158pf | C BC238/BC547/2N3904
|---c1---X----|--|---|----B
--- | | E
gnd 22k 330pf |
| |------|--- 10k--1nf---o/p
---- | |
gnd 150pF 2k2
(LA8AK) | |
XTAL ----------
Tester gnd
```

xtals tested (type HC18=HC49 or HC25=HC50 when no remarks)

1512: 1511.76-1512.36, df=0.6 HC6/U
1536: 1535.93-1536.41, df=0.5 HC6/U
3581.250: 3580.88-3582.33, df=1.45kHz HC6/U
3686.4: 3686.18-3687.7, dF=1.5kHz

4194.304: 4193.96-4196.09, dF=2.1kHz
4434.61875: 4431.38-4435.69 (HC6U TV colour burst xtal), df=4.3kHz
4444.4: 4443.79-4447.00, df=3.2 HC6/U
6000: 6000.45-6003.32 NDK HC18, df=2.9kHz
6553.6: 6552.45-6557.81, df=5.5kHz
6506.25: 6504.5-6511.1 HC6/U, dF=6.5kHz
7864.32: 7869.32-7863.01, dF=6.3kHz
8000: 8001.67-8008.67, df=7kHz
9216.0: 9214.62-9221.51, df=6.9kHz, TEW
9403.125: 9401.75-9408.67, df= 6.9kHz, HC6/U
10240: 10238.54-10246.08, df=7.5khz NDK HC18
11595.18: 11593.66-11601.28, df=7.5kHz, HC6/U
13352.08: 13350.34-13359.94, df=9.6
14318: 14317.75-14329.35, dF=11.6kHz, computer xtal
17645.80: 17643.26-17654.55, df=11.3kHz
26786: 8927.86-8934.97, df=7.1, NDK
26965: 8993.444-8999.146
26965: 8993.571-8999.841
26965: 8993.744-8999.731
26985: 8993.78-8999.78, df=6kHz
26985: 8999.511-9005.690
26985: 8999.693-9005.916
27005: 8999.38-9007.11, df=6.73
27005: 8999.517-9007.100
27005: 8999.763-9007.661,
52500: 17479-17494, df=15kHz, HC6/U

--
remove ,xnd to reply

2688. Marconi RC748

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 17:02:27 UTC
From: "Alexander S. Wood" <alec_wood@nospamplease.ntlworld.com>
Message-ID: <GY_r8.3155$M71.652738@news6-win.server.ntlworld.com>
Source record: 45029
Cross-posted to: alt.ham-radio.mods,alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew,uk.radio.amateur

Has anyone got any information on a radio, Marconi RC 748. It appears to be a repeater unit (VHF), in a 19" rack mountable case. Any info at all greatly appreciated, especially programming and tune-up instructions.

Thanks

Alec Wood M1BNK

2689. Re: transformer inverts phase

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 17:47:58 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <ub11jhoqag2f08@corp.supernews.com>
Source record: 45030

Actually, a 180 degree phase shift is not the same as polarity inversion even for a repeating symetrical wave-form like 60 hz power. It only looks the same on a scope because you can't tell one cycle from the next because they all look the same. If you make any type of amplitude change to distinquish one cycle from the next, you quickly see that there is a major difference between polarity inversion and phase shift. Polarity inversion turns the waveform upside down without changing the time while a phase shift leaves the polarity in tact and shifts the time.

2690. Re: Yaesu FT-101 and Fox-Tango mods

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 18:38:12 UTC
From: EG <electricguy30@hotmail.com>
Message-ID: <a8q3l7inm1@slb3.atl.mindspring.net>
Source record: 45031
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Ned,

Are you talking about the resistor changes to cut out overload?

AB

"Ned Collins" <lucille@gofree.indigo.ie> wrote in message
news:96Wr8.5746$e5.34255@news.indigo.ie...
> Hi All,
>
> Technial Topics in Radcom (RSGB) covered the problems of FT101 and strong
> signals and also offered a solution that I carried out and found to be
very
> effective on my FT101B.
>
> Details are August 1979 P739 & October 1979 P938.
>
> Further details on request.
>
> 73's de Ned/EI5DS
>
>
>

2691. Re: Yaesu FT-101 and Fox-Tango mods

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 18:51:31 UTC
From: Ned Collins <lucille@gofree.indigo.ie>
Message-ID: <vy0s8.5855$e5.34493@news.indigo.ie>
Source record: 45032
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hi AB,

Yes, the modifiation requires a number of resistor changes.

Can send you the details in .jpg.

Please reply directly without the Spam trap.

73's de Ned/EI5DS

2692. FA: 1960's Heathkit Catalogs, 1959,1968 & 1969

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 20:50:47 UTC
From: Lew <bish3@mail.com>
Message-ID: <Hi2s8.350$rD4.279181@monger.newsread.com>
Source record: 45033
Cross-posted to: rec.radio.amateur.homebrew,rec.antiques.radio+phono,alt.guitar.amps

> These catalogs are packed full of vintage home electronics. Hundreds
> of kits that were sold 40 years ago including radios, TV's,test
> equipment,HI-FI,ect...
>
> http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1343768392
> http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1343779077
> http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1343755693
>
> A nice picture of what the electronics "boom" of the 60's looked like.
> Thanks for looking.

2693. Re: SL6440 as modification to HF transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 20:58:46 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <aq2s8.33350$oN6.699104@news1.east.cox.net>
Source record: 45034

I wouldn't be worried so much with mixer conversion losses on HF, a good diode ring mixer followed by a properly designed low-noise IF preamp will do wonders. The trick is to use transformer feedback from the emitter lead vs. resistive feedback to set the impedances and gain.

Gain is a cheap commodity. Dynamic range isn't.

Pete

"J M Noeding" <la8ak.xnd@online.no> wrote in message
news:3caa4855.27665211@news.online.no...
> I am promissed some SL6440 devices and wonder if somebody has
> experience in replacing other ringmixers with this device.
> FT-902 has a ringmixer of unknown data, but IP3 isn't particularly
> good so I wonder if it is easy to use SL6440 instead without too much
> problems. FT-902 also has a J310 buffer amplifier, but I am not
> certain if it is really 50 ohm.
> -1dB gain for SL6440 is 6dB better than any schottky diode ring mixer.
>
> 73
> Jan-Martin
> LA8AK
>
> PS. just finished my 136kc converter project tonight, tnx to all
> contributors!
> --
> remove ,xnd to reply

2694. FS: Just a bunch of "Stuff"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 21:04:04 UTC
From: aokd5fxt@cs.com
Message-ID: <20020407170404.02374.00000013@mb-fn.news.cs.com>
Source record: 45035

http://ourworld.cs.com/AO%20KD5FXT/ITEMS+1-15/1thru15.html

Some of mine.. some belonging to others.. some estate stuff... Amazing how quickly "stuff" adds up and clutters the garage.

Bill

2695. Re: Reading a Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 21:30:49 UTC
From: "Kenneth D. Grimm, K4XL" <kgrimm@adelphia.invalid>
Message-ID: <5ie1bu81k250u9q5gttjqbukoej46v8uhl@4ax.com>
Source record: 45036

On Sat, 6 Apr 2002 18:30:49 -0500, "KG4KLR" <kg4klr@arrl.net> wrote:

>I have built a few kits and am now trying to do a homebrew project from
>something I found on the ARRL website. It's an oscillator so you can do
>modulated CW on 2m FM.
>
>I have the schematic, all of the parts listed, but how do I transcribe the
>schematic to the board? Where do I even begin?
>
>73
>KG4KLR
>

If no template is available, you still might find that the circuit
board is already available from Far Circuits. They usually have
boards made up for ARRL projects.
http://www.farcircuits.net/

73 and good luck.
Ken K4XL - Replace "invalid" with "net" to reply.
*** BoatAnchor Manual Archive ***
On the web at http://bama.sbc.edu or
FTP site info: bama.sbc.edu login: anonymous p/w: youremailadr

2696. Wanted Led Backlight

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 22:08:58 UTC
From: James Skalski <jskalski@bellatlantic.net>
Message-ID: <3CB08145.8070509@bellatlantic.net>
Source record: 45037
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

I am looking for some LED backlight wafers approximately 1" x 6"
These were used in some of the ten tec transceiver displays.
Anyone have these or know of a source for them?
-- I would like to have some spares for the Argonaut II and Delta II
transceivers.
73,

Jim n2go

2697. Re: Wanted Led Backlight

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 22:12:34 UTC
From: ".Bill M." <TheRealExray@netscape.net>
Message-ID: <3CB0C452.78212EC7@netscape.net>
Source record: 45038
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

James Skalski wrote:
>
> I am looking for some LED backlight wafers approximately 1" x 6"
> These were used in some of the ten tec transceiver displays.
> Anyone have these or know of a source for them?
> -- I would like to have some spares for the Argonaut II and Delta II
> transceivers.
> 73,
>
> Jim n2go

Have you enquired at TenTec? They are pretty good about parts for their
products.
-Bill

2698. Phase noise (was Re: Hybrid PLL schematics (was Re: AD9854-driven PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 23:30:40 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CB0D672.1D85@pop.removethistomailme.net>
Source record: 45039
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Richard Hosking wrote:
>
> On the loop bandwidth issue, it is my understanding that the PLL will
> attenuate VCO phase noise within the loop filter bandwidth.

Only in parts of the spectrum close to the carrier, where the PLL's own noise performance is better than that of the VCO. This, rather than reference suppression, is the real reason why narrow loops are more common than wide ones.

The digitally-derived reference's broadband noise floor (neglecting the effect of the crystal filter and comparator) is around -140 to -150 dBc/Hz. The PLL chip's dividers effectively multiply the reference noise within the loop bandwidth by 20*log(N) dB, or about 60 dB at 1 GHz with Fcomp=1 MHz. So the best a DDS/PLL synthesizer with N=1000 can do is theoretically -80 to -90 dBc/Hz.

It's true that the crystal filter should ease this limitation significantly at offsets beyond its own bandwidth. Unfortunately, though, that's not the whole story. As Dean Banerjee points out in his book, the phase detector chip itself also has an effect, in some cases more than the often-quoted 20*log(N) degradation. He states that a digital 3-state PFD causes a 10*log(Fcomp) degradation in phase noise relative to the chip's own normalized noise floor. Not many PLL data sheets spell this out.

In the LMX2326's case, Dean says that the noise floor normalized to a 1 Hz bandwidth is -210 dBc/Hz. So the predicted minimum phase noise within the loop bandwidth is given by -210 + 10*log(Fcomp=1 MHz) + 20*log(N=1000), or around -90 dBc/Hz. Note that for the loop conditions stated, this is an absolute best-case figure -- it can't be improved by tweaking the loop filter, cleaning up the reference, or praying to Claude Shannon for divine intercession! In practice, there are numerous other factors that contribute to close-in phase noise, all of which tend to make it worse (resistor noise and so forth).

Now, to answer your question, go back and look at the figures for the ROS-2150VW VCO part. If the loop can never do better than -90 dBc/Hz within its bandwidth, then it makes sense to choose a loop bandwidth in the neighborhood of the frequency offset where the VCO's noise performance passes through -90 dBc/Hz. This would be around 5-7 kHz depending on the shape of the noise curve between the 1 kHz and 10 kHz points specified by the data sheet.

If Dean's not smoking crack, then using a wider loop bandwidth than this should actually make the VCO *noisier* beyond that bandwidth, not cleaner. We can run an experiment on the board to confirm this, using otherwise-identical loop filters designed for 5 kHz (blue) and 30 kHz (purple) bandwidths.

At offsets significantly narrower than either loop filter's bandwidth, the performance is very similar:

http://www.qsl.net/ke5fx/misc/5vs30200.gif

But at carrier offsets beyond 5 kHz, the narrower (5 kHz) loop filter starts to "win":

http://www.qsl.net/ke5fx/misc/5vs302k.gif

The 10 kHz/division plot shows significant degradation at large offsets:

http://www.qsl.net/ke5fx/misc/5vs3010k.gif

At 10 kHz, the loop with the 30 kHz filter is 8 dB noisier than the loop with the 5 kHz filter. This would impair adjacent-channel selectivity in a receiver, although the 30 kHz loop certainly locks faster (only a couple of milliseconds to go anywhere between 1 and 2 GHz).

> If the ICOM has
> a very low loop cutoff, that might explain why the close
> in phase noise is worse than our synthesizer.

Right. A wider loop bandwidth would just bring the same degradation visible in the narrow R-7000 plots out to wider offsets, which is clearly not a good idea. In both Icom's case and ours, composite noise at 10 kHz is limited primarily by the VCO.... unless we use a filter that's too wide, at which point the PLL itself becomes the limiting factor

> On the other hand phase noise on ours is worse
> at 10 KHz - this presumably reflects the VCO fundamental phase noise
> performance. Would it be worth setting our loop filter cutoff to as high a
> frequency as possible, consistent with adequate attenuation of the reference
> sidebands? In our case the reference freq is about 1.7 MHz. With a loop
> cutoff of Fref/50 (this is a reasonable assumption for a quasi 2nd order
> loop), this would allow a cutoff of 25-30 KHz or so.Phase noise would be
> attenuated within this bandwidth by the loop filter.(I think)

This was my reasoning when I first started playing with PLLs a couple of years ago. It seemed to me that a DDS-driven PLL should be able to achieve lock times in the submillisecond range *and* provide exceptional signal purity, even with a cheap VCO. Now I understand why that was naive, although it's taken long hours of experimentation and study to become comfortable with the facts of life. There is just no getting around the fact that you need a clean VCO if you want a clean synthesizer.

If more manufacturers talked about that 10*log(Fcomp) term in their data sheets, I would have wised up a lot sooner.

> On a related issue, is it worth considering a discrete loop amplifier,
> rather than opamp? It is certainly possible to get lower noise with
> discrete components while retaining the higher VCO control voltage
> swing

Possibly a couple dB could be gained with discrete transistors, but the loop filter would become harder to tweak. I made a couple of half-hearted stabs at using the Icom R7000's discrete charge pump circuit at one point, but could never get the thing to settle down and fly right at the wider loop bandwidths I was using.

I don't think it would be worthwhile to mess around with other types of gain blocks. The OP-27 is a pretty quiet opamp -- it's good enough for the YIG driver section in the Tektronix 490-series analyzers -- and the R209/C216 combination seems to do a good job suppressing the broadband noise it does contribute.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2699. S2001A TUBE, HELP YOUR DATES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 23:53:38 UTC
From: Tito Tavella <lu6dbu@infovia.com.ar>
Message-ID: <a8qldf$ujn2r$1@ID-103975.news.dfncis.de>
Source record: 45040
Cross-posted to: rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hello, i have a pair of 2001A tubes, but not have dates him. Anyhone maybe help?
Thanks
TITO
LU6DBU
Argentina Amateur Radio Station

2700. Re: Synthesizer Spur Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 23:57:23 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CB0DCB6.5CF5@pop.removethistomailme.net>
Source record: 45041

Jack Smith wrote:
>
> John:
>
> Good suggestions. Here's what I've found:
>
> (1)You will find a couple of scope shots accompanying the following
> discussion at http://home.cox.rr.com/k8zoa/Synthesizer.htm
>

Well, it doesn't look like the loop's oscillating, but it doesn't look normal by any stretch of the imagination. I still suspect instability. Not crazy about the fuzziness of the trace near the base of the main peak... that's usually oscillation.

> (2) I moved the reference tap to 8 KHz, and rewired the jam inputs to
> the 4059 to divide by 100, thereby returning to the 800 KHz test
> frequency. (I didn't have a crystal that yielded 10 KHz with the
> 4059.)
>
> This changed the loop filter parameters, so I resorted to the old
> "replace the fixed R's with pots and adjust until the results look
> better." The R values are a lot different, series R was 100 K, now
> 2.3K, damping R was 10K, now 250 ohms.

Those sound much more reasonable. I wonder if your loop filter is picking up clock harmonics by capacitive/inductive coupling? Looks like those spikes are occuring at roughly 12-14 kHz intervals, rather than 8 kHz.

> By adjusting the two resistors, I was able to get the phase detector
> output "kicks" to have a clean damped response without ringing. (If I
> squint a bit, though, there looks to be a periodic signal buried in
> the noise. I don't trust the "1.96 KHz" C1 auto measurement.)

Why are you having to make this measurement at 20 mV/division? Can you record the result of a frequency excursion that represents a couple volts' change in the VCO tuning voltage, to get the noise out of the picture?

>
> (3) The results look a LOT better than with the 1 KHz reference
> frequency. Still not quite where it should be, but it looks more like
> a synthesizer than a broadband quasi random noise generator.
>
> (4) I thought about 10 KHz steps but decided that it would be much

> more flexible with 1 KHz steps. But, the results are so much more
> promising with 8 KHz steps that I will give up on the 1 KHz idea.

I think that's wise.

>
> (5) As you can see from the scope shot, I'm seeing quite a bit of
> noise on the VCO steering line. I'm not sure if this is normal or
> something of concern.
>

Noise on the VCO tuning line is ALWAYS of great concern. It should look
clean as a whistle, as far as you can tell on a scope.

> (6) As you can see, I can now resolve the first sidebands and they are
> 44 dB below the carrier.
>
> (7) Also, the wider span shot shows the higher order spurs do roll off
> (albeit slowly), unlike what I was seeing with a 1 KHz reference.
>
> (8) I did see the National App Note and built an Excel spreadsheet a
> couple days ago to implement the calculations. When I tried to
> implement the resultant design, I found that any capacitance at the
> output of the phase detector (even as little as 33 pF) caused severe
> loop oscillation. I also found the simplified technique in the Fujitsu
> app note of some help as well.

Ulrich Rohde recommends a 1 meg resistor between the 4046's charge pump
output and ground. This will help keep it out of the "dead zone" where
the effective PD gain falls to zero. I don't know why 33 pF should
throw your loop into oscillation -- that's likely to be worth
investigating.

> I have all of the required constants (Kvco = 415 KHz/volt, based on
> measurements and curve fitting) except the charge pump output on the
> 74HC4046. In terms of voltage, it swings Vcc for 4xpi radians. I
> believe that translates to around 5 mA for 4 PI radians, based on the
> short circuit output current of a logic gate in the 74HC4046, but I'm
> not 100% comfortable with that conversion.

Keep in mind that you're using a good-sized resistor in series with it,
so the charge pump current gain is effectively reduced. In a
third-order passive loop filter, R1 should be reduced drastically or
limited altogether.

I'd recommend downloading Dean Banerjee's PLL book "PLL Performance,
Simulation, and Design" from the National site. You can also buy it
from Amazon if you want a hardcopy. It was pretty enlightening when I
was climbing this particular learning curve awhile back.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2701. Re: Synthesizer Spur Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-07 23:59:17 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CB0DD29.3386@pop.removethistomailme.net>
Source record: 45042

John Miles wrote:
>
> Keep in mind that you're using a good-sized resistor in series with it,
> so the charge pump current gain is effectively reduced. In a
> third-order passive loop filter, R1 should be reduced drastically or
> limited altogether.

...er, *eliminated* altogether.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2702. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 01:14:25 UTC
From: Kijoma <bill_news@kSiPjAoMma.com>
Message-ID: <a8qqti$2so$1@news5.svr.pol.co.uk>
Source record: 45043
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

for possible alternates to the ERA series, go look at the SGA series from
sirenza microdevices (formerly stanford microdevices)

--
Bill Lewis
Engineering Director
Kijoma Solutions Ltd
RF - Analogue - Digital - Software
Electronic Product Design & Consultancy
Email : Bill.Lewis_@_kijoma.com (removes the _'s)

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message
news:3CAD1F22.1E41@pop.removethistomailme.net...
> John Miles wrote:
> >
> > ... Once the boards are ready, it'll be trivial for anyone to
> > build a digitally-tunable octave-band source for any range of
> > frequencies between 100 MHz and 3 GHz. That'll definitely open up some
> > interesting RF projects to people who previously lacked the inclination
> > toward the detail work. Hobbyists can stop goofing around with those
> > CATV tuner hacks and build themselves a REAL spectrum analyzer, for
> > instance. :)
> >
>
> The initial round of PC boards is back and as usual Richard Hosking (and
> his board house) have done a great job. Pics at:
>
> http://209.95.122.40/jm/synth2.jpg
> http://209.95.122.40/jm/synth.jpg
>
> The synth is up and running fine on this PCB, and once we make a few
> minor tweaks (like simplifying the DDS power supply regulator circuit
> and substituting an improved part for the ERA-5 MMIC), the boards should
> be ready for purchase via PayPal from Richard within a few weeks. Cost
> should be in the neighborhood of $20-$25 per board, similar to his
> AD9854-only boards.
>
> Watch this space...
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam

> ----------

2703. Spring Cleaning: here's what's left...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 01:19:10 UTC
From: sparky@cet.com
Message-ID: <3cb0eefb.14627790@news.cet.com>
Source record: 44947
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Cleaning up the shop and here's a pile of junk that's collecting dust. Everything is 'make-an-offer'. Email me with any questions or if you need a pic. I may trade all or part for a decent HF general coverage receiver. Whatever the offer, any personal checks must clear before I ship.

==========

* Heathkit IG-72 audio signal generator;
* Hickok model 121 (cardmatic) tube tester, includes cards for 322 tubes, approx 50 lbs;
* O-scope, Telequipment model S54A (doesn't work, no power); 20 lbs;
* Power transformer, Marantz. 8VAC, 68.5VAC, 73VAC (low current), should easily power a 300W audio amp; 17 lbs;
* Power transformer from ARC PS; 117VAC 7 step primary; secondaries: 315 - 415VAC; 66.0 - 86.4VAC/CT; with matching chokes, and with cap for LV winding; total weight 15 lbs;
* DY-9/ARC-1 Dynamotor, 8 lbs.
Input 26VDC @ 4.0A, output 360 VDC @ .135A continuous,
Input 26VDC @ 7.5A, output 310 VDC @ .355A intermittant;
* One 1000' spool of Belden 9311 (RG-58A/U);
* JVC model 3050, AM/FM/PB, 3" B/W TV, w/AC adapter, only defect is the antenna tip broken off;

==========

The following is a bunch of parts that were mostly scrounged from dead radios. Some are real antiques. The parts will be sold as a lot. A small goldmine for the homebrewer:

* Several dozen pots, rotory and slide types;
* A couple dozen tube sockets, octal & min, a few ceramics;
* 31 large crystal sockets, 19 ceramic;
* Small box of vari-caps, up to 400pF, air & mica, many trimmers;
* Large homemade dual vari-cap (seperate shafts, and pretty well made), 400pF each section, 1/8" plate spacing;
* A few small audio & power transformers, most specs unknown;
* A small box of selenium rectifiers, specs unknown;
* One dozen meters, a couple larger ones too;
* A bootboxful of various coils, switches, knobs, assemblies, etc;
* Hundreds of tubes, all pulls. Several shoe-boxes full of miniatures, some compactrons, and here's a list of everything else that I'm willing to part with:

1A7 1Q5 1N5x2 6A7 6AC7x2 6BG6 6BQ6GA/6CU6
6D6 6F6-G 6H6 6Q7-G 6SA7-GT 6SK7 6SL7-GT
6SN7-GTA 6SQ7-GTx2 6V6-GTx5 6146x4 6146B 12DQ6
12JB6A 12SL7-GT 41 80 7984x2 4X150Ax2

End of parts lot. I have other parts in the shop if you can think of anything specific that I can add to the lot, like chips, connectors, crystals, etc. I will not add any RF power transistors or any more tubes, so don't ask!

2704. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 01:20:57 UTC
From: Kijoma <bill_news@kSiPjAoMma.com>
Message-ID: <a8qr9q$32v$1@news5.svr.pol.co.uk>
Source record: 45044
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

pay attention to the supply filter to the VCO, a suggestion would be a NPN
series pass transistor with 47uF on its base to gnd (try BC849C)
and say 10-22k from collector to base.

Emitter to VCO.

Collector to supply in.

wide tuning VCOs only need microvolts of ripple to produce 100's of Hz of
deviation.

Also try to model the loop filter to keep filter resistor values low, if the
PLL has a high current charge pump setting , use it.

--
Bill Lewis
Engineering Director
Kijoma Solutions Ltd
RF - Analogue - Digital - Software
Electronic Product Design & Consultancy
Email : Bill.Lewis_@_kijoma.com (removes the _'s)

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message
news:3CAEB6D8.5325@pop.removethistomailme.net...
> Richard Hosking wrote:
> >
> > John
> > Would shielding sections of the board and/or separating parts of the
ground
> > plane make any difference?
> > Also the close in phase noise of the ICOM LO was much worse but the
noise at
> > 10 KHz was much better than the point to point version. Was this due to
loop
> > filter design or could you identify some other reason - eg VCO
performance
> > etc?
>
> As I noted in my earlier reply (to Mike Monett?), the Icom's strength is
> its twin-discrete VCO design. They use a very low loop bandwidth, less
> than 100 Hz as far as I can tell, and much higher-quality VCOs that
> cover only half the range (770-1290 MHz as opposed to 1000-2000). There
> is no way to make an inexpensive off-the-shelf integrated VCO compete
> with theirs -- I'm doing well to get as close to their performance as I
> am.

>
> It's possible that some type of shielding arrangement could buy another
> dB or so in the broadband noise arena, but I doubt it would be worth it.
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

2705. Re: S2001A TUBE, HELP YOUR DATES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 01:29:34 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <3cb0f1b3_2@newsa.ev1.net>
Source record: 45045
Cross-posted to: rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Use the 6146B, same thing.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Tito Tavella" <lu6dbu@infovia.com.ar> wrote in message
news:a8qldf$ujn2r$1@ID-103975.news.dfncis.de...
> Hello, i have a pair of 2001A tubes, but not have dates him. Anyhone maybe
> help?
> Thanks
> TITO
> LU6DBU
> Argentina Amateur Radio Station
>
>

2706. Re: Wanted Led Backlight

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 01:34:39 UTC
From: n4god@fdn.com
Message-ID: <87c9acf9.0204071734.33072678@posting.google.com>
Source record: 45046
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

".Bill M." <TheRealExray@netscape.net> wrote in message
news:<3CB0C452.78212EC7@netscape.net>...
> James Skalski wrote:
> >
> > I am looking for some LED backlight wafers approximately 1" x 6"
> > These were used in some of the ten tec transceiver displays.
> > Anyone have these or know of a source for them?
> > -- I would like to have some spares for the Argonaut II and Delta II
> > transceivers.
> > 73,
> >
> > Jim n2go
>
> Have you enquired at TenTec? They are pretty good about parts for their
> products.
> -Bill

Try this guy he has blank EL's that you can cut to fit...

Miller Engineering
PO Box 282
New Canaan, CT 06840-0282 USA
Tel. 203-595-0619
Fax 203-322-6116
E-mail us at: milleren@microstru.com

AL

2707. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 02:37:18 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CB10232.52A7@pop.removethistomailme.net>
Source record: 44949
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Kijoma wrote:
>
> pay attention to the supply filter to the VCO, a suggestion would be a NPN
> series pass transistor with 47uF on its base to gnd (try BC849C)
> and say 10-22k from collector to base.
>
> Emitter to VCO.
>
> Collector to supply in.
>
> wide tuning VCOs only need microvolts of ripple to produce 100's of Hz of
> deviation.
>
> Also try to model the loop filter to keep filter resistor values low, if the
> PLL has a high current charge pump setting , use it.
>

That's pretty much what I've done. The VCO has its own dedicated
emitter-follower supply.

Looks like we're going with the GALI-5 as a replacement for the ERA-5.
The last batch of ERA-5SMs I got in had a strange tendency to
oscillate... at about 3 kHz.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2708. Re: Hybrid PLL schematics (was Re: AD9854-driven PLL)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 02:38:39 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <a8r0ctbfd1@nntp9.atl.mindspring.net>
Source record: 44950
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

"Kijoma" <bill_news@kSiPjAoMma.com> Wrote:

>
> for possible alternates to the ERA series, go look at
> the SGA series from sirenza microdevices (formerly
> stanford microdevices)
>

Hmmm... I am curious. My understanding is that MiniCircuits uses the
same chip as the Stanford Microdevices, just repackaged.

Last time I looked, they had pretty much identical parts with the same S
parameters.

Anyone know for sure ?

Jim Pennell

2709. Re: Phase noise (was Re: Hybrid PLL schematics (was Re: AD9854-driven PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 02:52:17 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <a8r16f$u6g$1@slb2.atl.mindspring.net>
Source record: 44951
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

```
----- Original Message -----
"John Miles" <jmiles@pop.removethistomailme.net> Wrote:

>
> Possibly a couple dB could be gained with discrete transistors,
> but the loop filter would become harder to tweak. I made a
> couple of half-hearted stabs at using the Icom R7000's discrete
> charge pump circuit at one point, but could never get the thing
> to settle down and fly right at the wider loop bandwidths I was
> using.
>
> I don't think it would be worthwhile to mess around with other
> types of gain blocks. The OP-27 is a pretty quiet opamp -- it's
> good enough for the YIG driver section in the Tektronix 490-series
> analyzers -- and the R209/C216 combination seems to do a good job
> suppressing the broadband noise it does contribute.
>

As I recall, with extremely high sensvitivity VCOs there is an additional
problem due to the wideband noise floor of most op-amps.

This extends far beyond the loop bandwith and it is part of the reason
good charge pump filters may be a good choice.

Granted, in a charge pump, you only get down to the inherent noise
contribution of the resistors in the integrator R/C but it DOES filter off
of the wideband noise from other sources that are beyond the loop filters
bandwidth.

Of course, there can easily be other things that limit the noise floor so
that the contribution of an Op-Amp loop filter may not matter. There are
so many things to consider it's hard to say where the noise floor is coming
from in many synthesizer designs.

Jim Pennell
```

2710. Re: 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 04:37:08 UTC
From: smitjs@mweb.co.za
Message-ID: <3cb11bfa.375739@news.mweb.co.za>
Source record: 44952
Cross-posted to: sci.electronics.misc,rec.radio.amateur.homebrew

On Sat, 06 Apr 2002 18:13:30 -0600, "Joe Bramblett, KD5NRH"
<kd5nrh@kd5nrh.net> wrote:
>IIRC, the European version is called PMR446 or soemthing similar.
>Basically, it's the cheap UHF walkie talkies designed for families to
>keep in touch over short (about a mile in most outdoor conditions)
>distances. The American FRSs work on 14 channels in the 462-467MHz
>range, and cost between US $15 (For single channel toys) and $70
>(Fancier ones with FM broadcast receive, weather alert, and whatever
>else could fit into the case) I have no idea what the price range or
>specification for the European version is.

Hi Joe and ebverybody who replied,
Thank you
I will try to find out if these things are available here.
Dave, no , I will not go there. It is not my intention to be a problem
to anybody. Thank for the warning.
Thanks Clive, I will try out these wireless headphones to see if I
could get 100m range.
Thanks Mark for the 100Mhz tip. No, the neighbours will not be upset
about rifle shots. They will be informed beforehand so they could have
the opportunity to check that one do not collect antything else except
jackal. The whole operation must always be totally above board as far
as the farmers are concerned.
Thank you all again.
Regards
Johan Smit

2711. FS: Hinged top steel cabinet

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 04:53:42 UTC
From: jrobmills@aol.comrx320
Message-ID: <20020408005342.10483.00002067@mb-ml.aol.com>
Source record: 44953

I have a nice hinged top steel cabinet. It is 9 in high, 11 1/4 wide and 11 1/2 deep. The sides are vented and the back is solid except for the lower 3 in which is open for access to a chassis (chassis not included). There is no front panel but a
9 X 11 1/4 piece of sheet metal or aluminum would fix that. It is in great shape but could probably use a coat of paint due to it's 40 - 50 years of age (been in my attic 25 of them).
I'll ship and pick up the freight any place in 48 states, $25.00
Drop the RX320 to reply via e-mail

Rob Mills ~~~

2712. Re: Phase noise (was Re: Hybrid PLL schematics (was Re: AD9854-driven PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 05:09:18 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CB12616.4667@pop.removethistomailme.net>
Source record: 44954
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Jim Pennell wrote:
>
> As I recall, with extremely high sensvitivity VCOs there is an additional
> problem due to the wideband noise floor of most op-amps.
>
> This extends far beyond the loop bandwith and it is part of the reason
> good charge pump filters may be a good choice.

Yep. The usual practice is to add a final RC integrator between the opamp and VCO. In my case, I used an 82-ohm resistor and a 0.1 uF/100 pF combination. Without it, you can definitely see the effect of the opamp's noise. Fortunately the OP-27 doesn't seem to mind the extra load capacitance....

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2713. Re: More on 17m amp prob

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 10:11:53 UTC
From: motsteve@mediaone.net
Message-ID: <motsteve-0804020615080001@c-66-176-88-250.se.client2.attbi.com>
Source record: 44955

In article <jJtr8.1987$1W1.51420@news1.mts.net>, "Kent Haase"
<ijeh99@mb.sympatico.ca> wrote:

> Guess I should sign when I reply
>
> Kent VE4KEH
>
> "Bill Meara" <n2cqr@clix.pt> wrote in message
> news:3cad5c53.4660852@news.clix.pt...
> > Thanks to all those who sent suggestions. I realized that I left out
> > some needed info.
> > <clip>
> > The biasing diode is NOT thermally coupled to the final's heat sink.
> > Do you guys think that it would be worth the effort to move that diode
> > so it would heat up along with the finals? What's the theory here?
>
> The forward voltage drop of a p-n junction decreases with an increase in
> temperature. That is what contributes to thermal runaway in a bipolar
> transistor. I'm not too sure that the statement that beta increases with
> temperature is true, but I have been wrong before.

Beta does increase with temperature. Just look at the characteristic
curves at 60 deg celcius. Incremental change in base current makes for
larger collector current changes at 60.

Bipolar transistors are usually designed and characterized for a given
application such as linear or non-linear operation. This is not to say
that you can't use either in a particular application, it just makes it
harder to design the actual circuit. As far as stability is concerned, I
didn't see the first posts, but I'm guessing that you are using the finals
in the common emitter mode. A cheap way to get more stability and better
linearity is with negative feedback. You can put some small value of
resistance in the emitter circuit with no bypasses on them. This will
reduce your gain, but you don't get anything for no price. Depending on
your collector current I would calculate the emitter resistor to be enough
to give you about 0.1vdc across it. You may also need to bump up the base
to ground resistor a little to bring the base bias up to compensate.
Experiment. That's what homebrew is all about.

73,

Steve WB4CZR

RF is a real pain.

2714. Re: Reading a Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 11:29:18 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <W86$QdGO8Xs8EAob@ifwtech.co.uk>
Source record: 44956

KG4KLR wrote:
>I have built a few kits and am now trying to do a homebrew project from
>something I found on the ARRL website. It's an oscillator so you can do
>modulated CW on 2m FM.
>
>I have the schematic, all of the parts listed, but how do I transcribe the
>schematic to the board? Where do I even begin?
>
There is a section in the ARRL Handbook explaining some of the basic principles, with an example to show how it can work.

There is also a lot of recent literature on circuit board design for Electromagnetic Compatibility that includes many of the same ground-rules.

After that, it's the same for everybody: actually doing it, and gaining practical experience.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
New e-mail: g3sek@ifwtech.co.uk
New website: http://www.ifwtech.co.uk/g3sek

2715. Small Wonder Labs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 11:45:43 UTC
From: NoBody <NotHere@NoWhere.Net>
Message-ID: <3CB182BB.EAA61B0D@NoWhere.Net>
Source record: 44957

Does anyone know if SML is open for business. ??

Sent 2 EMAIL inquiries and haven't received an answer

Ted - KD4EE

2716. Re: Small Wonder Labs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 12:19:24 UTC
From: rcnixon@mindspring.com
Message-ID: <3cb18aa9.3962005@news.mindspring.com>
Source record: 44958

Geez, I hope so. I just sent him a PMO for a PSK20!

NoBody <NotHere@NoWhere.Net> wrote:

>Does anyone know if SML is open for business. ??
>
>Sent 2 EMAIL inquiries and haven't received an answer
>
>Ted - KD4EE
>

Russ
"Two-fifteen, no ambulance needed!"
Subtract all nines to reply

2717. Re: Small Wonder Labs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 13:21:16 UTC
From: troglodite@aol.com
Message-ID: <20020408092116.01011.00003409@mb-cu.aol.com>
Source record: 44959

>Does anyone know if SML is open for business. ??
>
>Sent 2 EMAIL inquiries and haven't received an answer
>

They sure are. Just purchased a PSK20 about a week ago. It's already together and working. Lost a small part and Dave replaced it without question. Nice folks, excellent product.

Doug Moore

2718. Re: noise generator: how to silence down a TV receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 13:48:01 UTC
From: Norm Mann <folder0735@hotmail.com>
Message-ID: <3cb19f10$0$190@news.impulse.net>
Source record: 44960

"Luca Ciastellardi" <lucaaah@libero.it> wrote in message
news:3CB034DA.E49D1FA1@libero.it...
>
> I know i am going to stir up some trouble. Please forgive me, i would
> not start it if i didn't need it.
> I have a crazy neighbour that plays very loud TV during night time, all
> night.
> Since she is crazy the Police cannot do anything.
> I am looking for a short range (50 meters are enough) noise generator
> that could erase her annoying noises (white noise is quite more
> acceptable).
> I tried to use a couple W at 430 MHz close to her TV antenna but, with
> my greatest surprise, nowadays TV are quite selective and this did not
> do the trick.
> Can anyone help me? Technically it looks to me like a big challenge,
> since the spectrum is so wide.

I'm assuming that you want the noise generator to mask the noise in your
place rather than doing something which will expose you to nuisance laws or
malicious interference enforcement actions.
While you could design and build an audio noise generator, try the simple
way first - set an unmuted broadcast FM radio or an unsquelched V/UHF
amateur radio to an unused frequency and increase the audio until it drowns
out the neighbors noise.
You could also try experimenting with active noise suppression by sampling
the incoming noise and inverting it to cancel it out as it enters your
place.

-CB

2719. needed Radio switch Model 86 wafers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 14:32:44 UTC
From: James Skalski <jskalski@bellatlantic.net>
Message-ID: <3CB167DE.3000307@bellatlantic.net>
Source record: 44961

I need some replacement ceramic wafers and extra contactsy for the
bandswitch.
--
73,

Jim n2go

2720. Re: Yaesu FT-101ee conversion to 6146 experiences??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 15:06:42 UTC
From: "Michael P. Williams" <williams@fdt.net>
Message-ID: <3CB1B202.E0F642A1@fdt.net>
Source record: 44962
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

The pair of 6JS6C's have been sold.

Tubes were offered and sold to AB BROWN.
I have no other 6JS6C's (or 6KD6's, 6146's, etc...).

Thanks to all who responded!
(I had no idea how many loyal FT101 fans were still out there.)

73 to all,
Mike Williams
NZ4K
EL89tq

2721. Re: Small Wonder Labs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 15:11:52 UTC
From: NoBody <NotHere@NoWhere.Net>
Message-ID: <3CB1B30C.3BCAD2A2@NoWhere.Net>
Source record: 44963

Thanks for the response... I'm considering his WM-20 SSB kit... any comments on this transceiver kit ????

Ted - KD4EE

Troglodite wrote:

> >Does anyone know if SML is open for business. ??
> >
> >Sent 2 EMAIL inquiries and haven't received an answer
> >
>
> They sure are. Just purchased a PSK20 about a week ago. It's already together
> and working. Lost a small part and Dave replaced it without question. Nice
> folks, excellent product.
>
> Doug Moore

2722. Re: 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 15:36:40 UTC
From: Bruce Clothier <bc10@le.ac.uk>
Message-ID: <a8sgpm$pd2t$1@rook.le.ac.uk>
Source record: 44966
Cross-posted to: sci.electronics.misc,rec.radio.amateur.homebrew

john graesser <graesser@tca.net> wrote in message
news:uap9l7id2niq9f@corp.supernews.com...
> Did I miss the audio modules, all I saw were data modules, with the
handheld
> versions looking a lot like car alarm remote controls, or remote car door
> unlock controls.
> thanks, John.
>
Talking of these 433MHz modules: I had an idea I wanted to pursue and would
welcome input
I'm trying to monitor wildlife activity at night using a small B&W video
camera. At the moment, I'm simply recording it on video-tape with a VCR, but
as this is in the garden shed its not such a good idea. In any case, I'd
rather record onto the computer HDD. The distance from camera to computer is
around 50metres. I was thinking of transmitting it with a 433MHz Rx/Tx.
Would this be feasible?
Regards BruceC

2723. First project/ first radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 16:22:09 UTC
From: Matt <mthomas@biocontrolsys.com>
Message-ID: <3cb1c2e9$1@news.nwlink.com>
Source record: 44965

Greetings, all,

I'm looking for a first project(s). I recently got my technician's license, but still have no radio. It seems every time I'm ready to go out and get one, some unexpected expense comes along and eats up my radio savings. So I'm looking for a project for a transmitter and receiver (I'd be perfectly happy if it worked only for code) that is either inexpensive or can be built over time as money becomes available for parts. Projects for any other equipment I'll need will be appreciated, also. I spent a few years doing computer repair, so I know how to solder and can do so on relatively small parts (1mmx2mm fuses, small wires, LEDs, etc.). Of course, there are still tons that I don't know about building radios or electronic equipment. If there is a good book or website that would lead me through this (preferrably while explaining why it all works), I'd appreciate a point in that direction. Building stuff and figuring out how it all works is the real reason I got into amateur radio, so any help is appreciated.

73,
Matt

2724. Re: Small Wonder Labs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 16:23:00 UTC
From: Walter <walter@accessus.net>
Message-ID: <Etjs8.275455$2q2.25133130@bin4.nnrp.aus1.giganews.com>
Source record: 44964

Dave (SWL) has been at AtlantaCon, the QRP'ers
gathering this weekend.

Give him an email today, he probably has a huge email
folder to answer.

73, Walter, AG5P

"NoBody" <NotHere@NoWhere.Net> wrote in message
news:3CB182BB.EAA61B0D@NoWhere.Net...
> Does anyone know if SML is open for business. ??
>
> Sent 2 EMAIL inquiries and haven't received an answer
>
> Ted - KD4EE
>
>

2725. Re: 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 16:49:47 UTC
From: Gary Glaenzer <nobulltrans@mchsi.com>
Message-ID: <LSjs8.249667$q2.28528@sccrnsc01>
Source record: 44967
Cross-posted to: sci.electronics.misc,rec.radio.amateur.homebrew

transmitted bandwidth may be a problem

"Bruce Clothier" <bc10@le.ac.uk> wrote in message
news:a8sgpm$pd2t$1@rook.le.ac.uk...
>
> john graesser <graesser@tca.net> wrote in message
> news:uap9l7id2niq9f@corp.supernews.com...
> > Did I miss the audio modules, all I saw were data modules, with the
> handheld
> > versions looking a lot like car alarm remote controls, or remote car
door
> > unlock controls.
> > thanks, John.
> >
> Talking of these 433MHz modules: I had an idea I wanted to pursue and
would
> welcome input
> I'm trying to monitor wildlife activity at night using a small B&W video
> camera. At the moment, I'm simply recording it on video-tape with a VCR,
but
> as this is in the garden shed its not such a good idea. In any case, I'd
> rather record onto the computer HDD. The distance from camera to computer
is
> around 50metres. I was thinking of transmitting it with a 433MHz Rx/Tx.
> Would this be feasible?
> Regards BruceC
>
>

2726. Re: First project/ first radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 17:19:54 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3CB1D005.F9273D77@gte.net>
Source record: 44968

Matt wrote:

> Greetings, all,
>
> I'm looking for a first project(s). I recently got my technician's license,
> but still have no radio. It seems every time I'm ready to go out and get
> one, some unexpected expense comes along and eats up my radio savings. So
> I'm looking for a project for a transmitter and receiver (I'd be perfectly
> happy if it worked only for code) that is either inexpensive or can be
> built over time as money becomes available for parts. Projects for any
> other equipment I'll need will be appreciated, also. I spent a few years
> doing computer repair, so I know how to solder and can do so on relatively
> small parts (1mmx2mm fuses, small wires, LEDs, etc.). Of course, there are
> still tons that I don't know about building radios or electronic equipment.
> If there is a good book or website that would lead me through this
> (preferrably while explaining why it all works), I'd appreciate a point in
> that direction. Building stuff and figuring out how it all works is the
> real reason I got into amateur radio, so any help is appreciated.
>
> 73,
> Matt

Hi Matt,
For VHF gear, I would recommend the Ten Tec kits- or for hF for that matter.
Nice starting point, well designed.

On the other hand, some of the older 2M gear like Clegg, or early Icoms go
extremely cheap on E-Bay.

Dale W4OP

2727. WTB MLA2500 parts rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 18:45:07 UTC
From: James Skalski <jskalski@bellatlantic.net>
Message-ID: <3CB1A306.5080501@bellatlantic.net>
Source record: 44969

I am looking for a MLA2500 parts radio. No power supply needed.
Just the caps and bandswitch need to be intact for use.
--
73,

Jim n2go

2728. WTB air variable 500pf

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 18:53:08 UTC
From: James Skalski <jskalski@bellatlantic.net>
Message-ID: <3CB1A4E7.20103@bellatlantic.net>
Source record: 44970

Meed an air variable that has the range of 18-500pf with at least 3500v spacing. a dual section section that adds up near that would be OK also.
--
73,

Jim n2go

2729. Re: S2001A TUBE, HELP YOUR DATES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 19:24:59 UTC
From: la8ak.xnd@online.no
Message-ID: <3cb0de89.259624107@news.online.no>
Source record: 44971
Cross-posted to: rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

On Sun, 7 Apr 2002 20:53:38 -0300, "Tito Tavella"
<lu6dbu@infovia.com.ar> wrote:

>Hello, i have a pair of 2001A tubes, but not have dates him. Anyhone maybe
>help?
>Thanks
>TITO
>LU6DBU
>Argentina Amateur Radio Station
>
>
isn't it just a version of 6146B which Kenwood used...

73,
LA8AK
--
remove ,xnd to reply

2730. Re: 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 20:19:08 UTC
From: john graesser <graesser@tca.net>
Message-ID: <ub3umgo88078e@corp.supernews.com>
Source record: 44972

> Talking of these 433MHz modules: I had an idea I wanted to pursue and would
> welcome input
> I'm trying to monitor wildlife activity at night using a small B&W video
> camera. At the moment, I'm simply recording it on video-tape with a VCR, but
> as this is in the garden shed its not such a good idea. In any case, I'd
> rather record onto the computer HDD. The distance from camera to computer is
> around 50metres. I was thinking of transmitting it with a 433MHz Rx/Tx.
> Would this be feasible?
> Regards BruceC

Do you want full motion video, or would something like slow scan tv work, where you are getting a photo every so many seconds? If you want full motion video, then how about hooking up a video digitizer to the camera which then feeds to a wireless lan port, with your computer also on the wireless lan. For even terrible looking video you use about 1 meg per minute with a very high compression codec, so a nights video will be the better part of .5 gig. For decent looking video compression you use 10 times that and for uncompressed video you don't have a hard drive large enough (about 12 gigs an hour), not to mention the 2 gig limit on some video editing tools, and the 4 gig per file limit on most 32bit windows versions.

2731. FA: Capacitors & inductors & crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 20:31:47 UTC
From: Mark Foltarz <mfoltarz@earthlink.net>
Message-ID: <T6ns8.810$CA6.81646@newsread1.prod.itd.earthlink.net>
Source record: 44973

caps & inductors
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1720742419

caps & inductors
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1720749497

8 mc crystals
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1344976141

2732. HELP NEED 4P/6T BAND SWITCH

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 20:48:41 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3CB20229.82C44CA@charter.net>
Source record: 44974
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

Hi
need one of these diminsions.
1 5/8" bolt holes
2 1/4" back from front
1/4 or 3/8 shaft.
ceramic wafers needs atleast 3 and extra spot for one more for tuned
input board.
chris NI4L

--

NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

2733. Re: First project/ first radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 23:46:44 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <nRps8.1711$Mx3.332148@news1.iquest.net>
Source record: 44975

Matt,

Check out www.qrpp-i.com

Join in on the Elmer 101 series. Build a 40m transceiver for about $40
total. It really works.

73

"Matt" <mthomas@biocontrolsys.com> wrote in message
news:3cb1c2e9$1@news.nwlink.com...
> Greetings, all,
>
> I'm looking for a first project(s). I recently got my technician's
license,
> but still have no radio. It seems every time I'm ready to go out and get
> one, some unexpected expense comes along and eats up my radio savings. So
> I'm looking for a project for a transmitter and receiver (I'd be perfectly
> happy if it worked only for code) that is either inexpensive or can be
> built over time as money becomes available for parts. Projects for any
> other equipment I'll need will be appreciated, also. I spent a few years
> doing computer repair, so I know how to solder and can do so on relatively
> small parts (1mmx2mm fuses, small wires, LEDs, etc.). Of course, there
are
> still tons that I don't know about building radios or electronic
equipment.
> If there is a good book or website that would lead me through this
> (preferrably while explaining why it all works), I'd appreciate a point in
> that direction. Building stuff and figuring out how it all works is the
> real reason I got into amateur radio, so any help is appreciated.
>
> 73,
> Matt
>
>
>

2734. Re: 433MhzTX/RX range?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-08 23:59:45 UTC
From: c.a.m@nospam.blueyonder.co.uk
Message-ID: <qjb4bu854r1pv7377e4r6f3psarmdnbqqm@4ax.com>
Source record: 44976

Lo BruceL.

>I'm trying to monitor wildlife activity at night using a small B&W video
>camera. At the moment, I'm simply recording it on video-tape with a VCR, but
>as this is in the garden shed its not such a good idea. In any case, I'd
>rather record onto the computer HDD. The distance from camera to computer is
>around 50metres. I was thinking of transmitting it with a 433MHz Rx/Tx.
>Would this be feasible?

Buy one of these home 2.4GHz FM video/sound links, the picture quality is very
good and 50 meters should be no problem with them.

Clive

2735. NEED BANDSWITCH CLIPPERTON L AMP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 00:54:54 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3CB23BDE.422CF09D@charter.net>
Source record: 44977
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

I need a replacement bandswitch for a dentron clipperton L amp.
If you have one laying around please email me. i need it bad!!!
chris NI4L

--

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Click here for more info... http://www.angelfire.com/nb/ni4l/

2736. al 572b

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 01:13:42 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3CB24046.EE2DB33D@charter.net>
Source record: 44978

can i get a price on
rfc-2
s1
what is the size exact diminsion of bandswitch? I really need to know
this.
how many wafers?
it is 6 turns correct?
shipped to 28681

--

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Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

2737. Re: Phase noise (was Re: Hybrid PLL schematics (was Re: AD9854-driven PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 02:22:28 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3cb24ec6$0$5541@echo-01.iinet.net.au>
Source record: 44979
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

>
> The digitally-derived reference's broadband noise floor (neglecting the
> effect of the crystal filter and comparator) is around -140 to -150
> dBc/Hz. The PLL chip's dividers effectively multiply the reference
> noise within the loop bandwidth by 20*log(N) dB, or about 60 dB at 1 GHz
> with Fcomp=1 MHz. So the best a DDS/PLL synthesizer with N=1000 can do
> is theoretically -80 to -90 dBc/Hz.
>
> It's true that the crystal filter should ease this limitation
> significantly at offsets beyond its own bandwidth. Unfortunately,
> though, that's not the whole story. As Dean Banerjee points out in his
> book, the phase detector chip itself also has an effect, in some cases
> more than the often-quoted 20*log(N) degradation. He states that a
> digital 3-state PFD causes a 10*log(Fcomp) degradation in phase noise
> relative to the chip's own normalized noise floor. Not many PLL data
> sheets spell this out.
>
> In the LMX2326's case, Dean says that the noise floor normalized to a 1
> Hz bandwidth is -210 dBc/Hz. So the predicted minimum phase noise
> within the loop bandwidth is given by -210 + 10*log(Fcomp=1 MHz) +
> 20*log(N=1000), or around -90 dBc/Hz. Note that for the loop conditions
> stated, this is an absolute best-case figure -- it can't be improved by
> tweaking the loop filter, cleaning up the reference, or praying to
> Claude Shannon for divine intercession! In practice, there are numerous
> other factors that contribute to close-in phase noise, all of which tend
> to make it worse (resistor noise and so forth).
>
In this case there will be a point where the expression -210 +
10*log(Fcomp=1 MHz) +
20*log(N=1000) is minimized. By my calculations it would be worthwhile to
make F(comp) as high as possible
Eg could one make the DDS frequency (say) 45 MHz with a crystal filter at
this frequency. The tradeoff would be that the DDS range will have to be
wider (this could limit filter types) and DDS spurs will probably be
greater. Also there will be practical limitations re the phase detector etc.
The phase det comparison freq could be 9 MHz (say) which would give a gain
of nearly 10 dB in phase noise over the 1 MHz figure

Richard

2738. Unbuilt Heath SB-220

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 02:35:03 UTC
From: J Koli <jkolin@worldnet.att.net>
Message-ID: <rrss8.17910$QC1.1079556@bgtnsc04-news.ops.worldnet.att.net>
Source record: 44980
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Anyone spot the unbuilt SB220 in the original 2 cartons on Ebay?

For all U collectors out there......Search for SB220. Leave out the hyphen.

Bidding ends in a few days....

JK

2739. Re: Phase noise (was Re: Hybrid PLL schematics (was Re: AD9854-driven PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 03:26:44 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CB25F7F.48FF@pop.removethistomailme.net>
Source record: 44981
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

The catch is that the minimum N for any dual-modulus prescaler is (M*M)-M, or 992 in the case of the LMX2326 with its fixed 32/33 prescaler modulus. With a 10.7 MHz reference the R modulus has to be 11 or greater to meet this criterion at a 1 GHz output frequency. I've been using R=12 in my code since the receiver project I'm working on needs the synth to tune down to 940 MHz.

The ADF4112 allows you to select other prescaler modulus values, but my earlier experiments with Fcomps in the several-MHz range did not look good, i.e. more noise, less stability. I'll revisit it next time I'm playing with my ADF4112 loop and see if I can take some graphs. I've been having trouble reproducing some of my initial observations lately... for instance, I now seem to be getting the best results from loop filters designed by following Banerjee's equations exactly, rather than by fudging the phase-detector current gain.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2740. Re: Antenna for 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 08:56:15 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <0Bzs8.919$6Z4.274064@news2-win.server.ntlworld.com>
Source record: 44983

> Probably more significant is the line loss. RG-58 has a loss of about 6
db
> per hundred feet at 2 meters. Good quality RG-59 should be similar, but
> good quality RG-59 is pretty hard to come by. The sort of RG-59 you find
> for TV installations is probably twice as lossy or worse.

==========
Unless you use coax cable used for satellite tv. It has copper braid as well
as thin copper sheet screening.
Of course it has a characteristic impedence of abt 75 Ohms.

Frank , gm0csz.kn6wh@ntlworld.com

2741. Re: Antenna for 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 09:01:44 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <1Bzs8.920$6Z4.273861@news2-win.server.ntlworld.com>
Source record: 44984

> KC8PMX wrote:
> > Connect an SWR meter to verify if the external antenna if within basic
> > tolerances. Most new transcievers have some sort or form of protection
> > against this but checking the antenna out cannot hurt.
>
> I will do that. Maybe I can pick one up used at a swap meet.
> Anything special to look out for? Any good/bad brands to get/avoid?
========
Ensure the SWR meter you get is suitable for at least 150 MHz.
Many low cost SWR meters are for HF only and often made for CB service.

Frank gm0csz.kn6wh@ntlworld.com

2742. Re: PSU for PC from 12v car battery??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 09:15:24 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <2Bzs8.921$6Z4.274129@news2-win.server.ntlworld.com>
Source record: 44985

> I have a requirement to run a Desk top type PC base unit in my car, and
> wonder if anybody out there has tackled the problems of supplying the
> various voltages and currents from a 12 volt battery.
>
> There are several companies able to supply Inverters that will do the job,
> but I have seen somewhere on the WWW where the motherboard was supplied
from
> the cigar lighter socket. Can anybody point me to a solution please.
==========
It all depends on the power requirements for your car based unit.

A laptop normally needs 19-20 V @ 1 Ampere. For this you can build your
own 12 --> 20 V DC converter.
But using a 12V-DC---> 230V-AC inverter ,using the laptop's AC power supply
unit might be an easier solution.
Whatever , ensure that the computer is only switched on with the car engine
already running .
Unholy spikes might damage the computer if already connected and switched on
before starting the engine.

Frank , gm0csz.kn6wh@ntlworld.com

2743. Re: More on 17m amp prob

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 10:00:14 UTC
From: n2cqr@clix.pt
Message-ID: <3cb2bb7b.13401864@news.clix.pt>
Source record: 44982

Thanks again to all those who sent suggestions on how I could fix the instability in the final amplifier of my new 17 meter SSB rig.

Over the wwekend I moved the biasing diode and positioned it right up against the junction of one of the transistors in the final and the heat sink that is common to both final amp transistors. The leads of the diode were almost enough to hold it in place, but I used some tin shears to cut a little "flap" in the heat sink material and bent the flap around the body of the diode. So the diode is getting a "nice warm hug" from the heat sink. Some heat sink compound was added for good measure.

Improvement was dramatic. Not only do I not see the spurs that I noticed before, but the new arrangement keeps the final MUCH cooler than before. EA8/EI0CL on Tenerife said he noticed an improvment in signal quality (but we agreed that it could have just been conditions).

This a was indeed a very "cool" fix. It was fun to put theory into action and then see immediate results.

73 de Bill N2CQR CU2JL

2744. Re: AM Transmitter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 11:07:17 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <e7As8.1307$eb2.194847@news11-gui.server.ntli.net>
Source record: 44986

>
> That's one way you can do it. A good approach for a working
> curcuit could be the following:
>
> - Build a simple CW transmitter from the ARRL handbook with 2 or
> 3 stages (stages counted including the oscillator).
> - Lead the +Vcc line of the last amplifier stage through a
> simple switiching (i. e.modulating) transistor that is fed (to
> the tranistor's base) with the audio frequency you want to
> modulate. Be sure to bias this transistor in an appropriate
> manner. That means that you should supply a constant base
> current via a variable voltage divider to the base of this
> modulating transistor. You must in every case check the
> modulation with an oscilloscope.
==========
Another way to AM modulate the above CW tx is to use a 7812 voltage
regulator enabling 12Watts input max with a signal transistor (low power)
between the reference leg of the regulator and earth, with appropriate
biassing.
Instead of the signal transistor you can try a small audio transformer
,enabling galvanic separation between TX and Modulator.
I have seen this done with microwave Gunn diode type of txes.

Frank gm0csz.kn6wh@ntlworld.com

2745. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 11:33:26 UTC
From: Lou <tech@dp.net>
Message-ID: <a8ujvr$2h27$1@news.dp.net>
Source record: 44987

I share the groups frustration... BUT - it may be the mail. IT SUCKS.
I live near Pittsburgh, PA (USA). It took one package shipped to me, a week to the day it was shipped - to get here from New York. I sent a package 2nd Day Priority to California. It arrived 2 weeks and 2 days later. I'm now awaiting a package from Alaska which was mailed out on March 16th. I have yet to see it and it's been close to a month. I guess the iceberg went off course, or perhaps a runner broke on the dogsled or one of the dogs broke a leg.

So, please allow a few more days..... IF after the 30th day you don't get your goods, then I would begin a search either through the seller OR the shipping to see where it is. IF it shows he truly hasn't shipped, then that is another matter.

I've never dealt with this guy before so know nothing of him. But in MY business, I'm here alone. IF I were to get ill and not able to pack and ship, it wouldn't get done. Otherwise, most of my stuff usually goes out same day as our mail comes in at 10:30 AM and all mail/UPS leaves town at 4:00 PM.
However, I would at least try to e-mail to let you know the status. I try to always inform the buyer the day I received their money and a ship status with each order.

I've dealt with many in the radio news groups and on E-Bay so my record can be researched.......I sell new and used items usually as a clearance - AS IS.

Just my two cents as a business man and a "victim" of the mail system.

Lou/Tech@DP.NET

"maxpowa" <maxpowa@iwontellsorry.com> wrote in message
news:Bdiq8.44473$DE4.6016@afrodite.telenet-ops.be...
>
> "Gollywog" <_eng@ilos.net> schreef in bericht
> news:ud5p8.232019$kb.13109030@news1.calgary.shaw.ca...
> >
> > Anybody:
> >
> > What's up with Dan's Small Parts? I'm sitting on an order, waiting for
the
> > monthly change of catalog he mentions at http://www.fix.net/dans.html
and
> > there has been nothing since Feb 11/02. Worse yet I've tried 5 times
> > (various days & times) and I can't get an answer on the phone. At this
> point

> > I'm glad I'm still holding the money order! I've done a google and there
> > don't seem to be any complaints to date - what's up?
> >
> > Mike
> > va4mgw
>
> I ordered from dan's 3 weeks ago myself, first time I ordered from him,
have
> been anoyed the last week, running to the mailbox every day, because I'm
> waiting for some stuff, and 3 weeks is to long, how the hell can it take
> someone 3 weeks to put some bags in a box, label it and put it in the
mail.
> Im' very glad also I've kept my part of the money order card, the ostal
> office promissed me they would get my money back incase of any problems.
> Didn't try to call, because a call to the states from here (belgium) is
> quite expensive.
>
> Steven
>
>

2746. Re: Unbuilt Heath SB-220

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 11:46:22 UTC
From: "J. Duffy Beischel" <jduffy@zoomtown.com>
Message-ID: <ub5l0jlljci097@corp.supernews.com>
Source record: 44988
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

$1,000 starting price for a 22 year old kit. Too funny, but then again there's fool born every minute.

I saw an unbuilt HW-9 QRP rig that was at $750 the other day - maybe it went for more.

Hard to believe people through away that much money on this old, outdated stuff.

"J Koli" <jkolin@worldnet.att.net> wrote in message news:rrss8.17910$QC1.1079556@bgtnsc04-news.ops.worldnet.att.net...
> Anyone spot the unbuilt SB220 in the original 2 cartons on Ebay?
>
> For all U collectors out there......Search for SB220. Leave out the hyphen.
>
> Bidding ends in a few days....
>
> JK
>
>
>
>

2747. Re: Unbuilt Heath SB-220

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 14:01:53 UTC
From: Bruce Lane <spammers@buzz.off>
Message-ID: <MPG.171c942ac847a3e298983e@news.drizzle.com>
Source record: 44989

In article <ub5l0jlljci097@corp.supernews.com>, "J. Duffy Beischel"
<jduffy(nospam)@zoomtown.com> says...

> $1,000 starting price for a 22 year old kit. Too funny, but then again
> there's fool born every minute.

Phineas Barnum was absolutely right.

Just as an experiment, I put up an old GC-1000 'Most Accurate
Clock' on E-pay last week. It was missing its front cover, and I never
could get it to do more than blink a few of its LEDs at me and make a
little noise.

I started the bidding at $10, which was less than I paid for the
manual copy from the nice folk at W7FG. The description clearly stated
that the thing seemed to have problems, and was sold as-is with the
manual copy. I didn't expect it to go for much over $30, considering its
condition, even with the insanity that can claim Ebay bidders.

Within 24 hours, it was up over $70, and it ended up going for
$150+! The winning bidder was the owner of an instrumentation firm who, I
assume, was going to fix it up and use it.

Go figure...

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

2748. Re: Synthesizer Spur Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 14:40:04 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <nju5bug1h00skfr54bo51rkrni7p7om8gv@4ax.com>
Source record: 44992

John:

Thanks for the helpful suggestions. I found the National PLL book and read it yesterday.

I've made some progress. After spending a couple of days designing loop filters and measuring step responses, but without change in the spurs, I did an experiment.

I disconnected the VCO steering pin and substituted a variable DC supply, set to give around 1 MHz. What I found was that the army of spurious signals still is there, at 8 KHz. Hence my immediate problem is not the loop filter.

As you suggested, these spurs must be sneaking in via some other path.

My first thought was a path via inadequate Vcc decoupling. I added a second 78L05 to feed only the 74HC4046, decoupled the +12 unregulated input to the new 78L05 via 100 ohm R & .01uF disc & 10uF tant. No change whatsoever in the spurious level when run with the external VCO drive supply.

Disconnecting the 8 KHz reference into the 4046 phase detector removes the spurs, which serves as a second check that Vcc coupling isn't the problem.

Following a suggestion in a Philips tech note, I then tried softening the 8 KHz reference via a 1K / 100 pF RC network. It softens the edge, but doesn't change the spurious level.

I'm inclined to not suspect the ground, as my construction is on a unbroken copper PC board, with Manhattan pads.

So, while I've made progress, I'm scratching my head over the exact source of the cross-contamination. Somehow--internal chip coupling?--my 8KHz clock is modulating the VCO, with the VCO loop completely disconnected.

Jack K8ZOA

On Sun, 07 Apr 2002 23:59:17 GMT, John Miles <jmiles@pop.removethistomailme.net> wrote:

>John Miles wrote:
>>
>> Keep in mind that you're using a good-sized resistor in series with it,
>> so the charge pump current gain is effectively reduced. In a
>> third-order passive loop filter, R1 should be reduced drastically or

>> limited altogether.
>
>...er, *eliminated* altogether.
>
>-- jm
>
>--
>http://www.qsl.net/ke5fx
>Note: My E-mail address has been altered to avoid spam
>--

2749. Re: Unbuilt Heath SB-220

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 15:53:37 UTC
From: Joe <joe.amp@NOSPAMverizon.net>
Message-ID: <58Es8.25651$7F1.10194@nwrddc02.gnilink.net>
Source record: 44990
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

> $1,000 starting price for a 22 year old kit.
That's easy, It will likely get $5,000 -10,000

-Joe

"J. Duffy Beischel" <jduffy(nospam)@zoomtown.com> wrote in message
news:ub5l0jlljci097@corp.supernews.com...
> $1,000 starting price for a 22 year old kit. Too funny, but then again
> there's fool born every minute.
>
> I saw an unbuilt HW-9 QRP rig that was at $750 the other day - maybe it
went
> for more.
>
> Hard to believe people through away that much money on this old, outdated
> stuff.
>
> "J Koli" <jkolin@worldnet.att.net> wrote in message
> news:rrss8.17910$QC1.1079556@bgtnsc04-news.ops.worldnet.att.net...
> > Anyone spot the unbuilt SB220 in the original 2 cartons on Ebay?
> >
> > For all U collectors out there......Search for SB220. Leave out the
> hyphen.
> >
> > Bidding ends in a few days....
> >
> > JK
> >
> >
> >
> >
>
>

2750. FS: RME Stuff

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 16:26:21 UTC
From: Walter Treftz <penguino@atlantic.net>
Message-ID: <3CB3162D.38D4DF5F@atlantic.net>
Source record: 44993

[No readable article body recovered]

2751. FS: RME Stuff

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 16:26:39 UTC
From: Walter Treftz <penguino@atlantic.net>
Message-ID: <3CB3163E.36507AD7@atlantic.net>
Source record: 44991

Following items, most from estates, is offered as "best reasonable
offer"
No charge for packing (if we can find a box) & taking to UPS/PO. Contact

--- hvalver@hotmail.com --- or --- penguino@atlantic.net
73 Walt (N4GL)

DM-36 Preselector/converter, 28-30mc & 56-60mc.
Dirty but VG phys condx.

Speaker Case. 8" spkr w/matching xfmr, 16"x9.5"x6"
case, Fair condx but restorable.

DB-20 Preselector, good condx (dirty)

DB-22A Preselector/tuner, 0.55-43 mhz, dirty but good
phys condx.

2752. Re: Unbuilt Heath SB-220

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 18:03:19 UTC
From: "." <spam@me.non>
Message-ID: <3CB32CEC.5B64BC53@me.non>
Source record: 44994
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hmmm....

Judging by the e-mails it sounds suspiciously like it's YOUR POST on eBay....

Tell us more about its history!

J Koli wrote:

> Anyone spot the unbuilt SB220 in the original 2 cartons on Ebay?
>
> For all U collectors out there......Search for SB220. Leave out the hyphen.
>
> Bidding ends in a few days....
>
> JK

2753. eBay insanity (was Re: Unbuilt Heath SB-220)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 18:30:08 UTC
From: thisplanetsux <thisplanetsux@yahoo.com>
Message-ID: <20020409113008.3d6bb42c.thisplanetsux@yahoo.com>
Source record: 44996

*** post for FREE via your newsreader at post.newsfeed.com ***

On Tue, 9 Apr 2002 07:01:53 -0700
Bruce Lane <spammers@buzz.off> wrote:

> Within 24 hours, it was up over $70, and it ended up going for
> $150+! The winning bidder was the owner of an instrumentation firm who,
> I assume, was going to fix it up and use it.

Dude, a couple years ago, I found the owner's manual to the original Apple
II at a thrift store for 50 cents, and sold it for $217 on eBay! The
winner paid with a company check from a sofware firm near Seattle, and I
have no idea why he (or the other bidders he battled with) wanted it so
badly. I was almost too embarrassed to ask him ;)

-----= Posted via Newsfeed.Com, Uncensored Usenet News =-----
http://www.newsfeed.com - The #1 Newsgroup Service in the World!
-----== 90,000 Groups! - 17 Servers! - Unlimited Download! =-----

2754. Re: More on 17m amp prob

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 18:31:56 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <pan.2002.04.09.18.31.55.857839.20408@oceanfree.net>
Source record: 44995

On Tue, 09 Apr 2002 10:00:14 +0000, Bill Meara wrote:

> Improvement was dramatic. Not only do I not see the spurs that I
> noticed before, but the new arrangement keeps the final MUCH cooler
> than before. EA8/EI0CL on Tenerife said he noticed an improvment in
> signal quality (but we agreed that it could have just been
> conditions).

What frequency do you use on 17M?

73, Ed. EI9GQ.

--

Linux 2.4.17

2755. Re: Unbuilt Heath SB-220

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 18:43:41 UTC
From: J Koli <jkolin@worldnet.att.net>
Message-ID: <xDGs8.14883$Rw2.1143375@bgtnsc05-news.ops.worldnet.att.net>
Source record: 44897
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Not my SB-220. Wish it was....

I should unbuild the one I built years ago! Hi....

> Hmmm....
>
> Judging by the e-mails it sounds suspiciously like it's YOUR POST on
eBay....
>
> Tell us more about its history!
>
>
>
> J Koli wrote:
>
> > Anyone spot the unbuilt SB220 in the original 2 cartons on Ebay?
> >
> > For all U collectors out there......Search for SB220. Leave out the
hyphen.
> >
> > Bidding ends in a few days....
> >
> > JK
>

2756. Re: Synthesizer Spur Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 18:44:50 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CB336B9.555@pop.removethistomailme.net>
Source record: 44898

Jack Smith wrote:
>
> John:
>
> I'm inclined to not suspect the ground, as my construction is on a
> unbroken copper PC board, with Manhattan pads.
>
> So, while I've made progress, I'm scratching my head over the exact
> source of the cross-contamination. Somehow--internal chip
> coupling?--my 8KHz clock is modulating the VCO, with the VCO loop
> completely disconnected.
>

Sounds like the only two things left are the ground and the varactor control line. What happens when you leave the loop filter disconnected, but bypass the varactor tuning line directly to ground *at the VCO* with a 0.1 uF cap?

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2757. Re: Unbuilt Heath SB-220

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 20:40:58 UTC
From: ".Bill M." <TheRealExray@netscape.net>
Message-ID: <3CB351DA.C632D875@netscape.net>
Source record: 44899
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

J Koli wrote:
>
> Not my SB-220. Wish it was....
>
> I should unbuild the one I built years ago! Hi....
>
> > Hmmm....
> >
> > Judging by the e-mails it sounds suspiciously like it's YOUR POST on
> eBay....
> >
> > Tell us more about its history!
> >
> >
> >
> > J Koli wrote:
> >
> > > Anyone spot the unbuilt SB220 in the original 2 cartons on Ebay?
> > >
> > > For all U collectors out there......Search for SB220. Leave out the
> hyphen.
> > >
> > > Bidding ends in a few days....
> > >
> > > JK
> >

Pretty easy to make the mistake that jkn1olo in Norwalk could be N1OLO,
John Kalotai in Trumbull, huh JK?
I too would be interested in how it 'survived' all these years.

-Bill

2758. Re: Phase noise (was Re: Hybrid PLL schematics (was Re: AD9854-driven PLL))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 20:52:47 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CB35477.5DE0@pop.removethistomailme.net>
Source record: 44900
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Richard Hosking wrote:
>
> By my calculations it would be worthwhile to
> make F(comp) as high as possible

Here's what happens on the ADF4112 with an Fcomp of 3.5 MHz (again, this is untestable on the LMX2326 because of its minimum-N requirement):

http://www.qsl.net/ke5fx/misc/3mhz.gif

At Fcomp=7 MHz the loop breaks into oscillation, so I backed the comparison frequency down to 3.5 MHz.

If I had to guess, I'd say the OP27's gain-bandwidth product of 8 MHz is coming into play, causing the opamp to roll off the narrow correction pulses coming in from the charge pump. I'll add an OP37 (GBP=63 MHz) to my next Digikey order and see what effect it has.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2759. Re: Synthesizer Spur Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 20:57:33 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <4ok6busvgtpoethocmcleetl7feiqovgf7@4ax.com>
Source record: 44901

On Tue, 09 Apr 2002 18:44:50 GMT, John Miles
<jmiles@pop.removethistomailme.net> wrote:

>Jack Smith wrote:
>>
>> John:
>>
>> I'm inclined to not suspect the ground, as my construction is on a
>> unbroken copper PC board, with Manhattan pads.
>>
>> So, while I've made progress, I'm scratching my head over the exact
>> source of the cross-contamination. Somehow--internal chip
>> coupling?--my 8KHz clock is modulating the VCO, with the VCO loop
>> completely disconnected.
>>
>
>Sounds like the only two things left are the ground and the varactor
>control line. What happens when you leave the loop filter disconnected,
>but bypass the varactor tuning line directly to ground *at the VCO* with
>a 0.1 uF cap?
>
>-- jm

John:

The spurs are still there when I bypass the VCO tuning line to ground
with the loop disconnected.

I built a second layout today, 74HC4060 & 74HC4046 only, to test for
possible layout problems. Both chips fed by separate 78L05's, Vcc
bypassed with .01 & 1.0 uFs, no parallel conductors, etc. VCO tuning
line connected only to an auxiliary variable power supply with 1 uF
bypass cap. Different chips from the first layout.

Same thing. No spurs with the 4060 running but not connected, but as
soon as I connect the 8 KHz clock line to the 4046 phase detector
input, the spurs show up.

Tomorrow, I'm going to build a varactor tuned Colpitts with an FET or
BJT and use only the phase detector portion of the 74HC4046 to check
if the problem is the VCO portion of the 74HC4046. That's my current
guess, at least. I have a few MVAM 108's and 109's in the junkbox so
the tuning diode won't be a problem.

I can't believe I'm the only person to run into this quirk with the
74HC4046, but I haven't found a reference to it in my library or on

the internet.

Thanks again for the ideas and assistance. More tomorrow.

Jack K8ZOA

2760. Re: Unbuilt Heath SB-220

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 21:01:43 UTC
From: Bob N2BR <brradioman@charter.net>
Message-ID: <ub6lljqr49oke0@corp.supernews.com>
Source record: 44902

Hey you just now lear that Ebay is the place to sale junk and get a hight
price,Those Ebay'ers will BUY Any thing!
"Bruce Lane" <spammers@buzz.off> wrote in message
news:MPG.171c942ac847a3e298983e@news.drizzle.com...
> In article <ub5l0jlljci097@corp.supernews.com>, "J. Duffy Beischel"
> <jduffy(nospam)@zoomtown.com> says...
>
> > $1,000 starting price for a 22 year old kit. Too funny, but then again
> > there's fool born every minute.
>
> Phineas Barnum was absolutely right.
>
> Just as an experiment, I put up an old GC-1000 'Most Accurate
> Clock' on E-pay last week. It was missing its front cover, and I never
> could get it to do more than blink a few of its LEDs at me and make a
> little noise.
>
> I started the bidding at $10, which was less than I paid for the
> manual copy from the nice folk at W7FG. The description clearly stated
> that the thing seemed to have problems, and was sold as-is with the
> manual copy. I didn't expect it to go for much over $30, considering its
> condition, even with the insanity that can claim Ebay bidders.
>
> Within 24 hours, it was up over $70, and it ended up going for
> $150+! The winning bidder was the owner of an instrumentation firm who, I
> assume, was going to fix it up and use it.
>
> Go figure...
>
> --
> Bruce Lane, Owner and Head Hardware Heavy,
> Blue Feather Technologies -- http://www.bluefeathertech.com
> Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
> kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
> "I'll get a life when someone demonstrates to me it would be superior to
> what I have now..." (Taki Kogoma)

2761. Re: First project/ first radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 22:02:44 UTC
From: Matt <mthomas@biocontrolsys.com>
Message-ID: <ub6p1ei2n9al11@corp.supernews.com>
Source record: 44903

Thanks for your replies. Both company's kits look good. I may start with SW just so that if I mess up I've wasted less money.

73,

Matt kd7ppk

2762. Re: Unbuilt Heath SB-220

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 23:05:38 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <3CB373C2.91E6306B@dialpoint.net>
Source record: 44906
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

This falls in the collector class. Just as people (collectors) will pay
more than the face value of money just because it is old.

"J. Duffy Beischel" wrote:
>
> $1,000 starting price for a 22 year old kit. Too funny, but then again
> there's fool born every minute.
>
> I saw an unbuilt HW-9 QRP rig that was at $750 the other day - maybe it went
> for more.
>
> Hard to believe people through away that much money on this old, outdated
> stuff.
>
>

2763. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 23:16:44 UTC
From: jrobmills@aol.comrx320
Message-ID: <20020409191644.25310.00003019@mb-ci.aol.com>
Source record: 44904

>it may be the mail.

Item's that I order on line from Denver that used to take 3-4 days now take 2 weeks to get to Tulsa.

2764. Re: Synthesizer Spur Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-09 23:24:52 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <qvt6bu438noctjqljfhgrfq0g6md4v1t4d@4ax.com>
Source record: 44905

>Tomorrow, I'm going to build a varactor tuned Colpitts with an FET or
>BJT and use only the phase detector portion of the 74HC4046 to check
>if the problem is the VCO portion of the 74HC4046. That's my current
>guess, at least. I have a few MVAM 108's and 109's in the junkbox so
>the tuning diode won't be a problem.
>
On second thought, since I already have the 74HC4046 running, I'll use
it as the VCO and try a second independent 74HC4046 used only as a
phase detector.

Jack K8ZOA

2765. Re: Synthesizer Spur Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 00:31:13 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <ql17buc7vjlollqlhig0ru0i8k819u5ps8@4ax.com>
Source record: 44908

On Sun, 7 Apr 2002 22:11:36 +0800, "Richard Hosking"
<zaprichardh@iinet.net.au(remove the zap)> wrote:

>Do you need to have 1 KHz resolution? I thought the AM band spacing was 9
>KHz. It will mean that your loop filter cutoff will have to be around 20 Hz
>to get acceptable reference suppression. I dont quite follow your loop
>filter - it looks as though there is R (100K) in series with the VCO control
>line with a damped C to ground (usual). However there is an additional C to
>ground without an R in series to make the filter 3rd order I presume.
>Trial and error is difficult with PLLs - whenever I have tried it I have
>ended up with oscillation. Better to model them and plug some values to a
>softrware program.
>
>
>Richard
>

Richard:

AM BC band spacing in North America is 10 KHz. Most of the rest of the world uses 9 KHz spacing. (There was a semi-serious suggestion a few years ago that North America convert to 9 KHz spacing to create more AM radio assignments, but it quickly went nowhere, as there is an embedded base of who knows how many millions of 10 KHz step-tuning receivers. Instead, we upped the top band limit from 1600 KHz to 1700 KHz.)

I'm making some progress, as shown in my other posts. The main spur problem appears to be caused by things other than the loop filter.

Jack K8ZOA

2766. Re: Synthesizer Spur Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 00:51:31 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CB38CA0.1F70@pop.removethistomailme.net>
Source record: 44909

Jack Smith wrote:
>
> >Tomorrow, I'm going to build a varactor tuned Colpitts with an FET or
> >BJT and use only the phase detector portion of the 74HC4046 to check
> >if the problem is the VCO portion of the 74HC4046. That's my current
> >guess, at least. I have a few MVAM 108's and 109's in the junkbox so
> >the tuning diode won't be a problem.
> >
> On second thought, since I already have the 74HC4046 running, I'll use
> it as the VCO and try a second independent 74HC4046 used only as a
> phase detector.
>
> Jack K8ZOA

I didn't realize at first that you were using the 4046's built-in VCO.
Those spurs may be unavoidable in that case... just part of the tradeoff
inherent in an all-in-one chip.

Are you using the specified value of load impedance for the VCO? My
guess is that the more you load it, the lower the spur amplitude will
be.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2767. FS C-Band LNB Amp unused

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 03:16:58 UTC
From: tonyS2@aol.com
Message-ID: <61e40296.0204091916.3056123f@posting.google.com>
Source record: 44910

Specs and photo at www.pearlone.com

Click Electronics
Priced for quick turnover
D & T
Alex Va

2768. Parts for Sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 03:33:55 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <jgOs8.1771$Mx3.343894@news1.iquest.net>
Source record: 44911
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap,rec.radio.amateur.misc

```
Junkbox Surplus Parts for Sale as of 04/01/02
==============================================
NEW stuff!!

LM78L62ACZ Volt regulators, TO92 format 5/$3.00 10/$5.00

SMT2222's - Surf Mount 2N2222 NPN's - 200/$5
SMT4403's - Surf Mount 2N4403 PNP's - 200/$5

470pf 5% surf mount caps - 200/$5
1000pf 20% surf mount caps - 200/$5

9.8304 Mhz Crystals, 1/4 in tall - 50 for $7.50

27mH inductors with radial leads - 50 for $7.00

================================================

Caps - All new, old stock. No pulls.
====================================
NEW .1 uF Poly/Film caps - 10% 250v, new stock, paper tape, nice
long leads. These are not NPO and are made by S&M Components
50/$3.00 or 100/$5.00

.01 uF ceramic caps, 10% 100v brand new by Kyocera
50/$3 or 100/$5

3300pf ceramic caps, 10% 50v
50/$3 or 100/$5

1000pf blue mono caps, 10% 100v
50/$3 or 100/$5

470pf ceramics on paper tape, rated 5% (NPO)
50/$3 or 100/$5

12pf NPO ceramics on tape
50/$4 or 100/$7

Voltage Regulators
==================
L7805ACV voltage regulators TO220 case. 5 for $4.00
L7806CV voltage regulators. TO220 case. 5 for $4.00
LM7812T voltage regulators. TO220 case. 5 for $4.00

LM317T Adjust. Positive Voltage Regulator TO220. 6 for $5.00
```

Key/Headphone Jacks
==========
These are 3.5mm female stereo PCB mount jacks. Can be used in
ugly/manhattan building projects with no problems.
3/$1.35 (or send a buck and a stamp)

Transistors
==========
TP2222 plastic TO92 NPN - NEW PARTS (House brand 2N2222)100/$7 50/4.00
2N3906's plastic TO92. PNP - 50/4.00 NEW PARTS
2N3704's plastic TO92, NPN - 50/4.00 NEW PARTS
2N7000 MOSFET - 5/$2

IRF540's TMOS Power FET, N-Channel, 27A, 100v RDS(on) = .070 Ohms
http://www.onsemi.com/pub/Collateral/IRF540-D.PDF
for data sheet - $1.00 each.

BC847B - Surface Mount NPN's, general purpose
CBO = 50v, CEO = 45v, EBO = 6v, Collector Current Max = 100 mA,
electrical characteristic curves for this unit are the same as the
PN2222A, SST222A, MMST2222A, and UMT222A transistor. These are new
stock, on SM tape.
200pc/$5.00

Op AMPS, Comparators
==========
LM741CN - Single Op Amp, 8 Pin Dip, 4 for $1.50
http://www.hep.ph.ic.ac.uk/~hallg/Instrumentation/Data/LM741.pdf

BA4558 - Dual Op Amp, 8 Pin Dip, 4 for $1.50
http://www.rohm.com/products/databook/standard/pdf/ba4558.pdf

BA10324 - LM324 equiv Quad Ground Sense Op Amp 14 pin, 4 for $1.50
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10358 - Dual Ground Sense Op Amp, 8 pin, 4 for $1.50
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10393 - Dual Comparator 8 pin dip, 4 for $1.50
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10339 - Quad Comparator 14 pin, 4 for $1.50
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA4560 - Dual High Slew Op Amp, 4 for $1.50
http://www.rohm.com/products/databook/standard/pdf/ba4560.pdf

Diodes
======
1N4148 - You always need these. 75 for $2.00 These are NEW.

Let me know if you're interested. All prices are post paid to the
USA, unless otherwise noted. I will ship to non USA addresses but we
need to discuss the shipping charges first.

--

=======================================
KB9BVN/QRP - New Whiteland IN - EM69WN
QRP-ARCI #10223 QRP-L #1540 FIST #5695
FISTS CC #764 - Proud Member ARRL
HEATH HW-9 @ 2W or NORCAL 40A @ 1.3W
INTO INFAMOUS AF4PS ATTIC DIPOLE
SOC #400 AND FLYING PIGS QRP #-57
=======================================

2769. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 06:23:05 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <Cn7KGZCJp9s8EArE@ifwtech.co.uk>
Source record: 44912

msbob wrote:
>maxpowa wrote:
>>
>> "Gollywog" <_eng@ilos.net> schreef in bericht
>> news:ud5p8.232019$kb.13109030@news1.calgary.shaw.ca...
>> >
>> > What's up with Dan's Small Parts? I'm sitting on an order, waiting for the
>>
>> I ordered from dan's 3 weeks ago myself, first time I ordered from him, have
>> been anoyed the last week, running to the mailbox every day, because I'm
>[...]
>> Didn't try to call, because a call to the states from here (belgium) is
>> quite expensive.
>
>Ground/sea mail from North America to Europe use to take about 4 weeks
>for me before 11 Sept 2001, and I find it now takes about 5-6 weeks.
>
>Air mail can take 1 to 3 weeks, but since $10 USD can roughly send a
>dozen QSL cards overseas, I would expect that your parts are being
>shipped by sea.

It's also possible that a package that plainly says "Air Mail" gets into
a surface mail bag.

I've more than once had an "Air Mail" package arrive very late, with a
Customs stamp saying "Port of Dover".

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
New e-mail: g3sek@ifwtech.co.uk
New website: http://www.ifwtech.co.uk/g3sek

2770. Re: S2001A TUBE, HELP YOUR DATES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 09:05:24 UTC
From: Claude Frantz <claude@pc0312a.rz.unibw-muenchen.de>
Message-ID: <3CB40054.9449BED1@pc0312a.rz.unibw-muenchen.de>
Source record: 44915
Cross-posted to: rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

J M Noeding wrote:

> isn't it just a version of 6146B which Kenwood used...

Do you have a data sheet of the S2001A ?

2771. Re: Synthesizer Spur Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 11:16:57 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <9d78bugaq05sj0t2c6tp72nhc78bc3enbd@4ax.com>
Source record: 44913

>
>Are you using the specified value of load impedance for the VCO? My
>guess is that the more you load it, the lower the spur amplitude will
>be.
>
I've tried several different VCO loads with similar results:

(a) TTL gate (7400 used as a buffer, looked at 7400 output)
(b) High Z load (FET follower)
(c) 1 K load (1K series R to 50 ohm spectrum analyzer input)
(d) TTL gate (7400 used as buffer, output of 7400 driving a 2:1
broadband transformer to see if ground loop between various
instruments connected to the test board. Spectrum analyzer connected
to the isolated output windings on the transformer.)

Jack K8ZOA

2772. Re: Unbuilt Heath SB-220

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 11:34:24 UTC
From: Dave Moorman <dmoorman4@NOSPAMattbi.com>
Message-ID: <dmoorman4-33D7D2.06343610042002@netnews.attbi.com>
Source record: 44914
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

In article
<rrss8.17910$QC1.1079556@bgtnsc04-news.ops.worldnet.att.net>,
"J Koli" <jkolin@worldnet.att.net> wrote:

> Anyone spot the unbuilt SB220 in the original 2 cartons on Ebay?
>
> For all U collectors out there......Search for SB220. Leave out the hyphen.
>
> Bidding ends in a few days....
>
> JK

Plus $175 for shipping, and it's already packed!

Dave

--
Dave Moorman
Downers Grove,
Illinois USA

Some men dream of fortunes, others dream of cookies.

2773. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 11:51:59 UTC
From: maxpowa <maxpowa@iwontellsorry.com>
Message-ID: <zHVs8.9269$Ze.2832@afrodite.telenet-ops.be>
Source record: 44916

"msbob" <msbob@hotmail.com-edy> schreef in bericht
news:3CB4D6DF.2A163735@hotmail.com-edy...

>
> Ground/sea mail from North America to Europe use to take about 4 weeks
> for me before 11 Sept 2001, and I find it now takes about 5-6 weeks.
>
> Air mail can take 1 to 3 weeks, but since $10 USD can roughly send a
> dozen QSL cards overseas, I would expect that your parts are being
> shipped by sea.

The stamp on my payment card says 03/08/02, so I'll have some more patience. I have some friends in Philly, we send stuff (music and such) from time to time, it used to take 1 to 2 weeks, didn't send anything to one another after sept. 11th. I still think it sucks, I can understand they check every package coming in, but the ones going out, if we over here think they pose a treath, postal service over here will check them. Inside Europe, it takes 2 to 4 days to get anything anywhere. It's plain paranoia and it doesn't make USA based merchants look good.

Steven

2774. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 12:04:27 UTC
From: NoBody <NotHere@NoWhere.Net>
Message-ID: <3CB42A1B.3EFE84AA@NoWhere.Net>
Source record: 44917

I wonder ---- Is this a USPS spin to justify the new rate gouge ! <G> ????

Ted - KD4EE

maxpowa wrote:

> "msbob" <msbob@hotmail.com-edy> schreef in bericht
> news:3CB4D6DF.2A163735@hotmail.com-edy...
>
> >
> > Ground/sea mail from North America to Europe use to take about 4 weeks
> > for me before 11 Sept 2001, and I find it now takes about 5-6 weeks.
> >
> > Air mail can take 1 to 3 weeks, but since $10 USD can roughly send a
> > dozen QSL cards overseas, I would expect that your parts are being
> > shipped by sea.
>
> The stamp on my payment card says 03/08/02, so I'll have some more patience.
> I have some friends in Philly, we send stuff (music and such) from time to
> time, it used to take 1 to 2 weeks, didn't send anything to one another
> after sept. 11th. I still think it sucks, I can understand they check every
> package coming in, but the ones going out, if we over here think they pose a
> treath, postal service over here will check them. Inside Europe, it takes 2
> to 4 days to get anything anywhere. It's plain paranoia and it doesn't make
> USA based merchants look good.
>
> Steven

2775. QST May 1956

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 12:13:04 UTC
From: Claude Frantz <claude@pc0312a.rz.unibw-muenchen.de>
Message-ID: <3CB42C50.A19FAFB3@pc0312a.rz.unibw-muenchen.de>
Source record: 44918
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.misc,rec.radio.amateur.homebrew

In the May 1956 issue of QST, there is an article about the right connection of electronic TR switches. Can anybody send me this article scanned ?

73,
Claude

2776. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 13:53:19 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <%kXs8.1779$Mx3.346332@news1.iquest.net>
Source record: 44919

No one likes a price increase but frankly the US 1st Class Postal rate is the biggest bargain on the planet. For less than 40 cents you can mail a 1 oz package from New York City to Los Angeles and be wildly assured it will get there in a few days.

I ship over 150 packages a year via USPS and it's 50% better than UPS or FED EX and about 50% cheaper. I ship to Europe, Australia, and Canada on a regular basis with very very few mishaps.

Perhaps Steven should just stop ordering things from US merchants, I wouldn't be a bit surprised to find out his package has been sitting in Belgium customs for the last few weeks. Maybe he should trust the Afghani postal system instead. (YIKES)

73

"NoBody" <NotHere@NoWhere.Net> wrote in message
news:3CB42A1B.3EFE84AA@NoWhere.Net...
> I wonder ---- Is this a USPS spin to justify the new rate gouge ! <G> ????
>
> Ted - KD4EE
>
> maxpowa wrote:
>
> > "msbob" <msbob@hotmail.com-edy> schreef in bericht
> > news:3CB4D6DF.2A163735@hotmail.com-edy...
> > >
> > > >
> > > > Ground/sea mail from North America to Europe use to take about 4 weeks
> > > > for me before 11 Sept 2001, and I find it now takes about 5-6 weeks.
> > > >
> > > > Air mail can take 1 to 3 weeks, but since $10 USD can roughly send a
> > > > dozen QSL cards overseas, I would expect that your parts are being
> > > > shipped by sea.
> > >
> > > The stamp on my payment card says 03/08/02, so I'll have some more
patience.
> > > I have some friends in Philly, we send stuff (music and such) from time
to
> > > time, it used to take 1 to 2 weeks, didn't send anything to one another
> > > after sept. 11th. I still think it sucks, I can understand they check
every
> > > package coming in, but the ones going out, if we over here think they
pose a
> > > treath, postal service over here will check them. Inside Europe, it

takes 2
> > to 4 days to get anything anywhere. It's plain paranoia and it doesn't
make
> > USA based merchants look good.
> >
> > Steven
>

2777. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 15:23:53 UTC
From: maxpowa <maxpowa@iwontellsorry.com>
Message-ID: <dOYs8.9926$Ze.2840@afrodite.telenet-ops.be>
Source record: 44920

"Scrounger" <brian@iquest.net> schreef in bericht
news:%kXs8.1779$Mx3.346332@news1.iquest.net...
> No one likes a price increase but frankly the US 1st Class Postal rate is
> the biggest bargain on the planet. For less than 40 cents you can mail a
1
> oz package from New York City to Los Angeles and be wildly assured it will
> get there in a few days.
>
> I ship over 150 packages a year via USPS and it's 50% better than UPS or
FED
> EX and about 50% cheaper. I ship to Europe, Australia, and Canada on a
> regular basis with very very few mishaps.
>
> Perhaps Steven should just stop ordering things from US merchants, I
> wouldn't be a bit surprised to find out his package has been sitting in
> Belgium customs for the last few weeks. Maybe he should trust the Afghani
> postal system instead. (YIKES)
>

Hey, a camel could ride the package over from afghanistan in less than 4
weeks. Perhaps I could stop ordering, but no really good surplus dealers in
europe. I don't criticise US merchants anyway, 4 weeks just is a long wait.

2778. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 16:38:38 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ub8qlhjorllt47@corp.supernews.com>
Source record: 44921

"Scrounger" <brian@iquest.net> wrote in message
news:%kXs8.1779$Mx3.346332@news1.iquest.net...

> I ship over 150 packages a year via USPS and it's 50% better than UPS or
FED
> EX and about 50% cheaper. I ship to Europe, Australia, and Canada on a
> regular basis with very very few mishaps.

WOW - you apparently deal with a different USPS than I do.

For small packages (of the type I normally deal with), UPS is 3 times as expensive as the postal service, FedEx even more expensive.

But there is a HUGE difference. Packages sent UPS take a few days within the U.S., how many a few is depends on the distance, but it's predictable (I'm speaking UPS Ground of course.) FedEx delivers your package in whatever length of time you contract for. I've never known them to be any different. When you hand a package to the USPS, it -may- arrive at some random time later. Once in a rare while you get a pleasant surprise and it arrives at a time somewhat similar to what UPS Ground would have taken. More often, it's a lot longer, often inexplicably. A package mailed across the state is just as likely to take days as it does weeks. A package mailed across the country will take a week or more, how much more is anyone's guess.

But in my mind, the biggest difference is that UPS and FedEx both know where your package is, and so do you if you go look. If you hand a packge to the Post Office, you have no idea where it is, and they apparently share in your ignorance. If it doesn't arrive, you have no recourse. It's lost, and because you don't have any idea how long it will take, by the time you are concerned, it's way too late. It may suddenly arrive months, maybe even years later. You simply have no idea. If it's insured you may get your money back a long time, and a lot of hassle later. But frequently, the money isn't the point.

Unless I'm sending something of very low value, the extra cost of UPS is well worth it to me.

..

2779. DAN's Small parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 17:32:32 UTC
From: James Skalski <jskalski@bellatlantic.net>
Message-ID: <3CB43514.9020706@bellatlantic.net>
Source record: 44922

It may not be the fastest way to get parts but you can find some hard to find parts and some real bargain prices. It is not Newark or digikey with many employees. It is a one man operation. No secretaries to answer dumb questions. If you are willing to wait a little while you can save some money on some items. Clogging up the newsgroup with updates on how many days it takes won't get the parts to you any sooner.
--
73,

Jim n2go

2780. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 17:35:42 UTC
From: Lou <tech@dp.net>
Message-ID: <a91tof$r8k$1@news.dp.net>
Source record: 44923

I echo all the sentiments below. I've been through Postal Hell just involving shipments within the Continental U.S - twice in a months time. NO THANKS.. From here in, my preference is UPS..... I'll pay a little extra to know where my shipment is. I've never had any problems with them.

Lou/Tech@DP.NET

> WOW - you apparently deal with a different USPS than I do.
>
> For small packages (of the type I normally deal with), UPS is 3 times as
> expensive as the postal service, FedEx even more expensive.
>
> But there is a HUGE difference. Packages sent UPS take a few days within
> the U.S., how many a few is depends on the distance, but it's predictable
> (I'm speaking UPS Ground of course.) FedEx delivers your package in
> whatever length of time you contract for. I've never known them to be any
> different. When you hand a package to the USPS, it -may- arrive at some
> random time later. Once in a rare while you get a pleasant surprise and
it
> arrives at a time somewhat similar to what UPS Ground would have taken.
> More often, it's a lot longer, often inexplicably. A package mailed
across
> the state is just as likely to take days as it does weeks. A package
mailed
> across the country will take a week or more, how much more is anyone's
> guess.
>
> But in my mind, the biggest difference is that UPS and FedEx both know
where
> your package is, and so do you if you go look. If you hand a packge to
the
> Post Office, you have no idea where it is, and they apparently share in
your
> ignorance. If it doesn't arrive, you have no recourse. It's lost, and
> because you don't have any idea how long it will take, by the time you are
> concerned, it's way too late. It may suddenly arrive months, maybe even
> years later. You simply have no idea. If it's insured you may get your
> money back a long time, and a lot of hassle later. But frequently, the
> money isn't the point.
>
> Unless I'm sending something of very low value, the extra cost of UPS is
> well worth it to me.
>
> ..
>

>

2781. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 17:55:53 UTC
From: ".Bill M." <TheRealExray@netscape.net>
Message-ID: <3CB47CA9.5673967D@netscape.net>
Source record: 44924

Lou wrote:
>
> I echo all the sentiments below. I've been through Postal Hell just
> involving shipments within the Continental U.S - twice in a months time. NO
> THANKS.. From here in, my preference is UPS..... I'll pay a little extra to
> know where my shipment is. I've never had any problems with them.
>
> Lou/Tech@DP.NET

It looks like everybody has a different USPS. I'm here on a little
island offshore from Puerto Rico and its extremely rare for USPS First
Class/Priority to take more than 3-4 days to anywhere in the continental
US...coming or going. The Post office quotes something like 4 weeks for
Parcel Post to/from this destination and its usually only two at the
most.
Mail to Europe is equally as good. Small air packets to Western Europe
5 days either way. Surface packages 20-30 days.
UPS and Fedex don't even offer ground service here so I have nothing to
compare to. Can't see how they could be any faster. I've had TWO
different Priority packages reach mainland addresses in LESS THAN 24
HOURS !!! Don't ask me how.
I've sent several hundred packages in the past 3-4 years and never had a
loss or un-warranted breakage.
I just wish they'd quit jacking up the rates on Priority Mail. For
'radio-size' packages the cost has doubled in the past 4-5 years.
I think the USPS is great and I don't even work for them!

-Bill WX4A/KP4

2782. Dc to Dc Tordial wound transformer.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 17:59:54 UTC
From: jrobmills@aol.comrx320
Message-ID: <20020410135954.07478.00002262@mb-cc.aol.com>
Source record: 44925

Hate to throw things away but have no use for a toridal wound transformer that
was salvaged from a large mobile linear.
How about $15.00 and I pick up the freight to any place in the 48 states???

Drop the rx320 to e-mail

Rob Mills ~~~

2783. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 19:30:30 UTC
From: Gollywog <_eng@ilos.net>
Message-ID: <qp0t8.8297$ir6.377333@news1.calgary.shaw.ca>
Source record: 44926

"maxpowa" <maxpowa@iwontellsorry.com> wrote in message
news:Bdiq8.44473$DE4.6016@afrodite.telenet-ops.be...
>
> "Gollywog" <_eng@ilos.net> schreef in bericht
> news:ud5p8.232019$kb.13109030@news1.calgary.shaw.ca...
> >
> > Anybody:
> >
> > What's up with Dan's Small Parts? I'm sitting on an order, waiting for
the
> > monthly change of catalog he mentions at http://www.fix.net/dans.html
and
> > there has been nothing since Feb 11/02. Worse yet I've tried 5 times
> > (various days & times) and I can't get an answer on the phone. At this
> point
> > I'm glad I'm still holding the money order! I've done a google and there
> > don't seem to be any complaints to date - what's up?
> >
> > Mike
> > va4mgw
>
<snip>

Hey - new catalog! Dated 04/09/02. I'm still sitting on my order (the money order is burning a hole in my pocket though). I think I'll try phoning again - it's $0.10 a minute for me (if he ever answers).

Mike

********* \\\\lll//// *********
********** \ -- -- / **********
********** (\@ @/) **********
*** --oOOOo---(_)---oOOOo-- ***
Real men edit the registry!

2784. balun question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 19:51:33 UTC
From: Zacharioudakis Lefteris <compusci@cytanet.com.cy>
Message-ID: <3CB497C5.1020200@cytanet.com.cy>
Source record: 44934
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,rec.radio.amateur

i need to construct a 1:1balun for my dipole, i have done the "choke-balun"
but i have some toroidal which i would like to use, any sugestions on how to
wound the toroidal (how many turns, what king of cable etc)

thanks in advance

73's de 5B4AGL

2785. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 22:09:48 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <sQ2t8.4386$C21.888603@news6-win.server.ntlworld.com>
Source record: 44927

> No one likes a price increase but frankly the US 1st Class Postal rate is
> Hey, a camel could ride the package over from afghanistan in less than 4
> weeks. Perhaps I could stop ordering, but no really good surplus dealers
in
> europe. I don't criticise US merchants anyway, 4 weeks just is a long
wait.
==========
There are a number of good surplus dealers in Europe ; to mention 2 :

1) Mainline Surplus - Leicester ,England
surplus@mainlinegroup.co.uk

2) BACO - Ymuiden , Netherlands phone: +31 255 511 612 , fax: +31 255
517 664

RF components
1) Barend Hendriksen www.xs4all.nl/~barendh

2) Kent Electronics www.kent-electronics.nl

Frank gm0csz.kn6wh@ntlworld.com

2786. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 22:24:05 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <9Y2t8.205699$Yv2.67130@rwcrnsc54>
Source record: 44928

> RF components
> 1) Barend Hendriksen www.xs4all.nl/~barendh
>
> 2) Kent Electronics www.kent-electronics.nl
>
> Frank gm0csz.kn6wh@ntlworld.com

$5.88 for an FST 3125??? $0.80 in onesy's from DigiKey.

W4ZCB

2787. PEV and PEP at 12 volts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 23:00:44 UTC
From: jehancoc@pacbell.net
Message-ID: <a95870c1.0204101500.403bbe44@posting.google.com>
Source record: 44930

I am building an amplifier strip to take 1mw up to about 1w. I am using 4 driver stages with an IRF510 final.

I am seeing about 7.05 volts peak-to-peak into a 50ohm resistive load on the scope. Using the following formula, this would translate into about 125mw.

PEP = (Peak-to-peak/2*.707)^2/50

The IRF510 output circuit was borrowed from a CW amp. I rebiased the amp to run Class A.

Given the 12 volt supply, I won't ever see more than 12 volts peak to peak out of this amp, correct? That would translate into 360mw.

So how do people get more than 360mw out of a 12v supply without voltage doubles, etc.? I've seen a number of circuits that suggest this.

Am I missing something?

2788. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-10 23:01:30 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <Vm3t8.1792$Mx3.348820@news1.iquest.net>
Source record: 44929

The camel better be able to swim or trod very well on ice and snow....or it'll never get there.

All Dan or anyone else can do is put it in the mail. What the carriers in the middle do with it, is out of his and your control.

> Hey, a camel could ride the package over from afghanistan in less than 4
> weeks. Perhaps I could stop ordering, but no really good surplus dealers in
> europe. I don't criticise US merchants anyway, 4 weeks just is a long wait.

2789. Re: help needed with Yaesu FT-101ee

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 00:01:34 UTC
From: &#65533;V <patrickh@ntelos.net>
Message-ID: <3o4t8.25262$GM.8917@atlpnn01.usenetserver.com>
Source record: 44931
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I am looking for programming software for a Yaesu FTH-2008 Handheld
Receiver. I have had no luck using search engines under Yaesu. I'm sorry
for interrupting your message with a message that doesn't even pertain, but
I'm out of luck so far. Can anyone help? My e-mail is
ppreacherpat2001@yahoo.com. Thanks.
AB Brown <abbrown@nospammail.com> wrote in message
news:a85hj6olt1@slb6.atl.mindspring.net...
> I just burned out a final tube (6JS6C) in my Yaesu FT-101ee today. I
wasn't
> sure of the cause and still am not, but when I placed the bandswitch in
the
> 160 meter position, and with the heater activated, the radio lights went
> dim. By the time I switched bands, the one final tube was gone. This all
> happened without activating the PTT. I wanted to find out what happened,
so
> I reinstalled the good and bad tube and duplicated the conditions: 160
> meters, heater on, PTT not activated. Immediately, the lights dimmed once
> again and the IC soared to over 0.15 mA with the bad tube in place. None
of
> the other bands cause this problem. With the tubes removed, the "short"
> doesn't occur on 160. What can be the problem? At first, I thought the
> tubes but why wouldn't the other bands cause the same results? I did
> recently rewire the transceiver to enable the CW position to be able to
use
> the AM filter. Could a rewiring mistake cause the symptoms on 160? Note
> that I also get a strong CW sidetone when the bandswitch is in the 160
> position and mode on CW. This is only when the tubes are in place.
Heater
> on and PTT not activated.
>
> Can anyone help me figure out what the heck is going on?
>
> Thanks,
> AB
>
>

2790. Re: PEV and PEP at 12 volts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 00:13:48 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <0z4t8.210366$af7.101589@rwcrnsc53>
Source record: 44932

> So how do people get more than 360mw out of a 12v supply without
> voltage doubles, etc.? I've seen a number of circuits that suggest
> this.
>
> Am I missing something?

Yup. Transformers.

W4ZCB

2791. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 00:20:47 UTC
From: msbob <msbob@hotmail.com-edy>
Message-ID: <3CB4D6DF.2A163735@hotmail.com-edy>
Source record: 44907

maxpowa wrote:
>
> "Gollywog" <_eng@ilos.net> schreef in bericht
> news:ud5p8.232019$kb.13109030@news1.calgary.shaw.ca...
> >
> > What's up with Dan's Small Parts? I'm sitting on an order, waiting for the
>
> I ordered from dan's 3 weeks ago myself, first time I ordered from him, have
> been anoyed the last week, running to the mailbox every day, because I'm
[...]
> Didn't try to call, because a call to the states from here (belgium) is
> quite expensive.

Ground/sea mail from North America to Europe use to take about 4 weeks
for me before 11 Sept 2001, and I find it now takes about 5-6 weeks.

Air mail can take 1 to 3 weeks, but since $10 USD can roughly send a
dozen QSL cards overseas, I would expect that your parts are being
shipped by sea.

2792. Re: help needed with Yaesu FT-101ee

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 00:41:13 UTC
From: budgie <budgie@nowhere.cantech.net.au>
Message-ID: <3cb4db83.3623288@news.cantech.net.au>
Source record: 44933
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Wed, 10 Apr 2002 20:01:34 -0400, "�V" <patrickh@ntelos.net> wrote:

>I am looking for programming software for a Yaesu FTH-2008 Handheld
>Receiver. I have had no luck using search engines under Yaesu. I'm sorry
>for interrupting your message with a message that doesn't even pertain, but
>I'm out of luck so far. Can anyone help? My e-mail is
>ppreacherpat2001@yahoo.com. Thanks.

I just tried a google search on:
software FTH-2008 program OR programming
and got a number of possibles. I suggest you do the same.

2793. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 01:36:36 UTC
From: Lou <tech@dp.net>
Message-ID: <a92pr0$1trp$1@news.dp.net>
Source record: 44935

Well, I just received a package via the Postal Service, which took a couple days shy of one month, from Alaska to PA. I've been told, they had to stop and put wheels on the Dogsled instead of runners, since Spring has arrived and no snow......

Lou/Tech@DP.NET

"Scrounger" <brian@iquest.net> wrote in message news:Vm3t8.1792$Mx3.348820@news1.iquest.net...
> The camel better be able to swim or trod very well on ice and snow....or
> it'll never get there.
>
> All Dan or anyone else can do is put it in the mail. What the carriers in
> the middle do with it, is out of his and your control.
>
>
> > Hey, a camel could ride the package over from afghanistan in less than 4
> > weeks. Perhaps I could stop ordering, but no really good surplus dealers
> in
> > europe. I don't criticise US merchants anyway, 4 weeks just is a long
> wait.
>
>
>

2794. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 02:17:11 UTC
From: "atec77(nospam)" <"atec77(nospam)"@hotmail.com>
Message-ID: <3cb4f208$0$11454$afc38c87@news.optusnet.com.au>
Source record: 44936

I find this kinda odd. I can send anywhere in my little country (AU) for around 4$ us overnight. one side to the other , and frankly I hate our postal service. maybe its all the nutters you have working in yours ?

Lou wrote:
>
> Well, I just received a package via the Postal Service, which took a couple
> days shy of one month, from Alaska to PA. I've been told, they had to stop
> and put wheels on the Dogsled instead of runners, since Spring has arrived
> and no snow......
>
> Lou/Tech@DP.NET
>
> "Scrounger" <brian@iquest.net> wrote in message
> news:Vm3t8.1792$Mx3.348820@news1.iquest.net...
> > The camel better be able to swim or trod very well on ice and snow....or
> > it'll never get there.
> >
> > All Dan or anyone else can do is put it in the mail. What the carriers in
> > the middle do with it, is out of his and your control.
> >
> >
> > > Hey, a camel could ride the package over from afghanistan in less than 4
> > > weeks. Perhaps I could stop ordering, but no really good surplus dealers
> > in
> > > europe. I don't criticise US merchants anyway, 4 weeks just is a long
> > wait.
> >
> >
> >

2795. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 03:36:01 UTC
From: Lou <tech@dp.net>
Message-ID: <a930tr$2je8$1@news.dp.net>
Source record: 44938

At this rate, nothing surprises me. Lou/Tech@DP.NET

"atec77(nospam)" <"atec77(nospam)"@(remove)hotmail.com> wrote in message
news:3cb4f208$0$11454$afc38c87@news.optusnet.com.au...
> I find this kinda odd. I can send anywhere in my little country (AU) for
> around 4$ us overnight. one side to the other , and frankly I hate our
> postal service. maybe its all the nutters you have working in yours ?
>
> Lou wrote:
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> > Well, I just received a package via the Postal Service, which took a
couple
> > days shy of one month, from Alaska to PA. I've been told, they had to
stop
> > and put wheels on the Dogsled instead of runners, since Spring has
arrived
> > and no snow......
> >
> > Lou/Tech@DP.NET
> >
> > "Scrounger" <brian@iquest.net> wrote in message
> > news:Vm3t8.1792$Mx3.348820@news1.iquest.net...
> > > The camel better be able to swim or trod very well on ice and
snow....or
> > > it'll never get there.
> > >
> > > All Dan or anyone else can do is put it in the mail. What the
carriers in
> > > the middle do with it, is out of his and your control.
> > >
> > >
> > > > Hey, a camel could ride the package over from afghanistan in less
than 4
> > > > weeks. Perhaps I could stop ordering, but no really good surplus
dealers
> > > in
> > > > europe. I don't criticise US merchants anyway, 4 weeks just is a
long
> > > wait.
> > >
> > >
> > >

2796. Re: More on 17m amp prob

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 03:39:58 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <iA7t8.265$Yb.182351@monger.newsread.com>
Source record: 44937

"Kent Haase" <ijeh99@mb.sympatico.ca> wrote in message
news:jJtr8.1987$1W1.51420@news1.mts.net...
> Guess I should sign when I reply
>
> Kent VE4KEH
>
> "Bill Meara" <n2cqr@clix.pt> wrote in message
> news:3cad5c53.4660852@news.clix.pt...
> > Thanks to all those who sent suggestions. I realized that I left out
> > some needed info.
> > <clip>
> > The biasing diode is NOT thermally coupled to the final's heat sink.
> > Do you guys think that it would be worth the effort to move that diode
> > so it would heat up along with the finals? What's the theory here?
>
> The forward voltage drop of a p-n junction decreases with an increase in
> temperature. That is what contributes to thermal runaway in a bipolar
> transistor. I'm not too sure that the statement that beta increases with
> temperature is true, but I have been wrong before.

I've seen claims tht he Beta increases, but I know that the minority
carriers increase with temperature. So the hotter it gets the less the
resistance differential between forward and back.

--
Roger (K8RI EN73)
WWW.RogerHalstead.com
N833R, World's Oldest Debonair? S#CD-2

>
> > Would that make the diode conduct more, reducing the bias (and the
> > gain) of the final as the thing heats up?
>
> The drop across the diode (ie the bias voltage) tracks the drop across the
> transistor's p-n junction, thus providing enough bias to maintain the same
> base current with changes in temperature.
>
> > Any tips on how to
> > physically connect the diode to the heat sink (just a square of thin
> > aluminum) How about Krazy Glue?
>
> Mount the diode in physical contact with the heatsink and use some heat
sink
> compound to thermally bond it to the sink. The stiffness of the diode's
> leads will probably be enough to hold it against the sink.

>
> >
> > Even with this annoying problem the rig is working very well. 4X4UN
> > said I was 20 over in Israel two nights ago. And everyone likes the
> > audio.
> >
> > 73 Bill CU2JL N2CQR
> > http://planeta.clix.pt/n2cqr
> > 73 de Bill CU2JL N2CQR
> > Sao Miguel Island, The Azores, Portugal
> > 37.7 N 15.7 W
> > http://planeta.clix.pt/n2cqr
>
>
>
>

2797. Re: balun question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 03:48:29 UTC
From: CAM <Cecil.A.Moore@IEEE.org>
Message-ID: <3CB5078D.FBBAA46C@IEEE.org>
Source record: 44939
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,rec.radio.amateur

Zacharioudakis Lefteris wrote:
>
> i need to construct a 1:1balun for my dipole, i have done the "choke-balun"
> but i have some toroidal which i would like to use, any sugestions on how to
> wound the toroidal (how many turns, what king of cable etc)

I use ten turns of RG-400 (teflon) on an FT-240-61 core. Works very well.
I use RG-400 because it is small with a large breakdown voltage.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2798. Re: PEV and PEP at 12 volts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 04:05:35 UTC
From: dtayloe@cox.net
Message-ID: <3CB50B8F.E793A230@cox.net>
Source record: 44940

You should be able to get at least 20v pk-pk with a 12v supply. Ideal would be a voltage swing from 0v to +24v. The +24v comes from the inductive kick from the output filter and the transistor supply choke. Connected directly to a 50 ohm load, you should be able to get at least 1w at 12v (20v pk-pk). It looks like you simply may not be driving the transistor hard enough.

To get more than 1w, a step up transformer is required so that the transistor can work against a lower impedance and develop more power. A the transistor output of 12.5 ohm is readily acheived with a 4:1 transformer to match this to the 50 ohm output filter. 12.5 ohms at 12v gives between 4-5w at 12v when driven to full 20v to 24v pk-pk voltage swing.

- Dan Tayloe, N7VE; Phoenix, Az; Az ScQRPions

lightmetal wrote:
>
> I am building an amplifier strip to take 1mw up to about 1w. I am
> using 4 driver stages with an IRF510 final.
>
> I am seeing about 7.05 volts peak-to-peak into a 50ohm resistive load
> on the scope. Using the following formula, this would translate into
> about 125mw.
>
> PEP = (Peak-to-peak/2*.707)^2/50
>
> The IRF510 output circuit was borrowed from a CW amp. I rebiased the
> amp to run Class A.
>
> Given the 12 volt supply, I won't ever see more than 12 volts peak to
> peak out of this amp, correct? That would translate into 360mw.
>
> So how do people get more than 360mw out of a 12v supply without
> voltage doubles, etc.? I've seen a number of circuits that suggest
> this.
>
> Am I missing something?

2799. Equipment 4 Sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 05:16:09 UTC
From: Radiodoc <radiodoc@docsradioden.com>
Message-ID: <t_8t8.301$x04.280834111@newssvr21.news.prodigy.com>
Source record: 44941

Visit http://docsradioden.com
for more listings and pictures. Some items are negotiable.
All trades considered.

Decibel Products UHF bandpass cavity,$75.00
Kenwood TR2500 handheld and Radio Shack Simplex Reperater combo. $75.00
Homebrew 10 meter amplifier $90.00
Eico Grid Dip Meter $30.00
Systron Donner 20Hz-512 Mhz Frequency Counter $75.00
Henry/Tempo 2 Meter FM amplifier $50.00
ICOm IC-U12 Commercial/Ham Programmable 406-470 Mhz Handhelds (No
Batteries) $30.00 Ea.
Eastren Time Designs "The Detective" Power Line analyzer $50.00
Kenwood Twin R599D/T599D, Super clean with manuals, no transceive cable
$400.00
Siltronics Model 90-6 VFO $60.00
Signal Engineering Thunder 8, 10/11 meter antenna Vertical Beam antenna
$100.00
Thanks for looking and 73's
Mike N6KYD

http://www.docsradioden.com

2800. noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 06:27:24 UTC
From: AB Brown <abbrown@nospammail.com>
Message-ID: <a93aas$68n$1@slb1.atl.mindspring.net>
Source record: 44942
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Currently, I am using two amateur radios for communicating: one is the Icom 718 and the other, strictly for 10 meters, is an older Realistic HTX-100. I have used the HTX-100 for about 5 years now and I just obtained the Icom less than 6 months ago. I am puzzled by something though that I was wondering if anyone could address- the noise blanker on the HTX is FAR superior to the one on the Icom. I am wondering why? The Icom was a lot more expensive and I just figured it would have a better blanker. It has AF DSP option, which I tried, and was disappointed. In every case on 10 meters, the HTX receives better due to blanked noise effectiveness.

I doubt I could internally modify the Icom's blanker for better performance so I am wondering if I could add an external, synchronous (or other ?) type noise blanker at the antenna input. I have read a few things about this type of blanker and, apparently by using noise generators, you can match the phase of incoming noise and cancel it out. Any suggestions for a blanker, either internal or external? I understand the synchronous type is better at lower Mhz, but will it work for 10/15 meters?

I believe the main sources of noise at my QTH are computer (of course) and pole transformer noise. The computer noise is easily solved (by turning off my monitor) but I have experienced the transformer noise for many years, and the HTX blanker always nullified it.

Appreciate any suggestions from the groups.

Thanks,
AB

2801. Re: PEV and PEP at 12 volts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 07:44:28 UTC
From: Ricardo Martins <ricardo.martins@pt.uu.net>
Message-ID: <3CB53EDB.1D459B2F@pt.uu.net>
Source record: 44943

Into an pure resistive 50 Ohm load, max. power dissipation should be: P
= R*I*I
since current into load should be: I = U/R = 12/50 = 0.24 A
there P = 50*0.24*0.24 = 2.88 W

From the formula I used you power is: 0.994 W, if you put 10% error on
your mesure equipment it is round 1 W

It could be right and it could be wrong.. who knows!?

lightmetal wrote:
>
> I am building an amplifier strip to take 1mw up to about 1w. I am
> using 4 driver stages with an IRF510 final.
>
> I am seeing about 7.05 volts peak-to-peak into a 50ohm resistive load
> on the scope. Using the following formula, this would translate into
> about 125mw.
>
> PEP = (Peak-to-peak/2*.707)^2/50
>
> The IRF510 output circuit was borrowed from a CW amp. I rebiased the
> amp to run Class A.
>
> Given the 12 volt supply, I won't ever see more than 12 volts peak to
> peak out of this amp, correct? That would translate into 360mw.
>
> So how do people get more than 360mw out of a 12v supply without
> voltage doubles, etc.? I've seen a number of circuits that suggest
> this.
>
> Am I missing something?

73

Ricardo / CT2GQV
--
Ricardo Martins

2802. Re: noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 13:33:07 UTC
From: Alan Price <AJP@topechelon.com>
Message-ID: <3CB5910E.51A344BE@topechelon.com>
Source record: 44944
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I have to ask, did you purchase the noise blanker for the ICOM? It is not standard.

Alan
W1HYV

AB Brown wrote:

> Currently, I am using two amateur radios for communicating: one is the Icom
> 718 and the other, strictly for 10 meters, is an older Realistic HTX-100. I
> have used the HTX-100 for about 5 years now and I just obtained the Icom
> less than 6 months ago. I am puzzled by something though that I was
> wondering if anyone could address- the noise blanker on the HTX is FAR
> superior to the one on the Icom. I am wondering why? The Icom was a lot
> more expensive and I just figured it would have a better blanker. It has AF
> DSP option, which I tried, and was disappointed. In every case on 10
> meters, the HTX receives better due to blanked noise effectiveness.
>
> I doubt I could internally modify the Icom's blanker for better performance
> so I am wondering if I could add an external, synchronous (or other ?) type
> noise blanker at the antenna input. I have read a few things about this
> type of blanker and, apparently by using noise generators, you can match the
> phase of incoming noise and cancel it out. Any suggestions for a blanker,
> either internal or external? I understand the synchronous type is better at
> lower Mhz, but will it work for 10/15 meters?
>
> I believe the main sources of noise at my QTH are computer (of course) and
> pole transformer noise. The computer noise is easily solved (by turning off
> my monitor) but I have experienced the transformer noise for many years, and
> the HTX blanker always nullified it.
>
> Appreciate any suggestions from the groups.
>
> Thanks,
> AB

2803. Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 14:27:37 UTC
From: "r.crowley" <rcrowley7@xprt.net>
Message-ID: <ubb7alendr4m63@corp.supernews.com>
Source record: 44945

Is this method used anywhere? With modern digital circuitry, it seems almost easier to do than traditional methods of amplitude modulation. (Assuming appropriate filtering to produce proper sine-wave output, not square wave!)

Is there any AM activity on amateur bands anymore?

2804. Sinclair Q-202G tuning

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 14:44:59 UTC
From: prentice@icomnet.com
Message-ID: <fb0353a.0204110644.408fd6bc@posting.google.com>
Source record: 44946

While attempting to tune one of these duplexers, I cannot get the "notch" to tune above the pass freq. on the lowpass cavities. I am trying to tune the cavities for 144.630, which they tune OK, and notch 145.230, which I cannot get an acceptable notch on that frequency. The same pair on the highpass cavities, but reversed, work fine (i.e. pass 145.230, notch 144.630). It seems some modification is needed to the stub(s) on the cavities. Any help or guidance would be much appreciated.

Prentice

2805. Re: Sinclair Q-202G tuning

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 15:22:34 UTC
From: gaschafer@attbi.com
Message-ID: <3cb5a912.3135412@netnews.attbi.com>
Source record: 44847

Those duplexers came in two ranges. 132 - 150 mhz or 148 - 174 mhz.
The cavities will usually
tune both ranges but the loops (where the notch is derived) may not.
You may have the high
split unit and the loops may not tune that low. I don't remember what
they have for stubs on that
duplexer but they made one several years earlier that they called a
"hybrid ring duplexer". It had
a complete ring with cables and several tuned stubs on the ring. In
order to put it on the ham
bands you could put in some right angle elbow connectors to slightly
lengthen the cables and
stubs. It worked great. On the 202 though you may need to change the
coupling loops in the
cans.

Easiest to call Sinclair with the exact model numbers and they can
tell you how it was originally
built and what would be needed to change it.

As a note, see if you may have the high and low pass cavities
reversed. Some cavities the notch
can be tuned on either side of the pass frequency and some can only be
tuned on one side.

73
Gary K4FMX

On 11 Apr 2002 07:44:59 -0700, prentice@icomnet.com (N4VBH) wrote:

>While attempting to tune one of these duplexers, I cannot get the
>"notch" to tune above the pass freq. on the lowpass cavities. I am
>trying to tune the cavities for 144.630, which they tune OK, and notch
>145.230, which I cannot get an acceptable notch on that frequency.
>The same pair on the highpass cavities, but reversed, work fine (i.e.
>pass 145.230, notch 144.630). It seems some modification is needed to
>the stub(s) on the cavities. Any help or guidance would be much
>appreciated.
>
>Prentice

2806. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 15:28:39 UTC
From: gaschafer@attbi.com
Message-ID: <3cb5aa4b.3448587@netnews.attbi.com>
Source record: 44848

Lots of AM activity! There are several guys running PWM on the ham
bands. There is some information at the Am window.

http://www.amwindow.org/

73
Gary K4FMX

On Thu, 11 Apr 2002 07:27:37 -0700, "r.crowley" <rcrowley7@xprt.net>
wrote:

>Is this method used anywhere? With modern digital circuitry, it seems
>almost easier to do than traditional methods of amplitude modulation.
>(Assuming appropriate filtering to produce proper sine-wave output, not
>square wave!)
>
>Is there any AM activity on amateur bands anymore?
>
>

2807. Re: noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 16:31:02 UTC
From: AB brown <abbrown@nospammail.com>
Message-ID: <a94dmmpjf1@nntp9.atl.mindspring.net>
Source record: 44849
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

"Alan Price" <AJP@topechelon.com> wrote in message
news:3CB5910E.51A344BE@topechelon.com...
> I have to ask, did you purchase the noise blanker for the ICOM? It is not
> standard.
>
> Alan
> W1HYV

Alan,

Although I purchased the Icom used, it did already have the noise blanker,
which hardly makes any difference in noise level when activated (unlike the
HTX). The AF DSP was purchased and added later, but to me it is no better
than the already present blanker.

AB

2808. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 16:34:15 UTC
From: n5kzw@arrl.net
Message-ID: <3cb5b91d.824663012@news.ev1.net>
Source record: 44850

On Thu, 11 Apr 2002 07:27:37 -0700, "r.crowley" <rcrowley7@xprt.net>
wrote:

>Is this method used anywhere? With modern digital circuitry, it seems
>almost easier to do than traditional methods of amplitude modulation.
>(Assuming appropriate filtering to produce proper sine-wave output, not
>square wave!)
>
>Is there any AM activity on amateur bands anymore?
>
>

I don't quite understand what form of transmission you are trying to
describe? PWM is a defined form of modulation. It is no more
amplitude modulated than CW is. Indeed, CW could be considered a form
of PWM.

PWM is used in some Radio Control (RC) systems found in model planes
and boats, although digital systems are the most common.

Regards,
Ed - N5KZW

2809. New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 16:53:37 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3CB5BF91.D4917111@charter.net>
Source record: 44851
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

New Life for Dentron MLA2500s
(QST May 96 pg.45-48)
MLA2500b.zip MLA 2500A/4CX800A Conversion package including
builders' details, ARRL Lab test data for all nine HF bands and
several
photos of the author's modified amplifier. This is a "zipped" file
898K in size.
(Does not include actual article)
http://www.svetlana.com/docs/TechBulletins/TB.html
i need some help i tried to download this but it will not work can
someone else try or do you have it on file somewhere and could you email
it to me?
thanks chris NI4L

--

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LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
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Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

2810. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 17:16:32 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0204110916.c23112f@posting.google.com>
Source record: 44852

"r.crowley" <rcrowley7@xprt.net> wrote in message
news:<ubb7alendr4m63@corp.supernews.com>...
> Is this method used anywhere? With modern digital circuitry, it seems
> almost easier to do than traditional methods of amplitude modulation.
> (Assuming appropriate filtering to produce proper sine-wave output, not
> square wave!)
>
> Is there any AM activity on amateur bands anymore?

Another ham here at the work QTH says that one of the local AM BCB
stations (WTVN 610 kHz) is doing that, but I do not know the details.

Jim
N8EE

2811. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 17:29:58 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <a94h6mhkg0@208.206.142.82>
Source record: 44853
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

If you haven't already, take a look at the QEX article farther down in
the menu. Probably as good a conversion. I couldn't get the QST article
to download, either.

Dick W0EX

NI4L wrote:
>
> New Life for Dentron MLA2500s
> (QST May 96 pg.45-48)
> MLA2500b.zip MLA 2500A/4CX800A Conversion package including
> builders' details, ARRL Lab test data for all nine HF bands and
> several
> photos of the author's modified amplifier. This is a "zipped" file
> 898K in size.
> (Does not include actual article)
> http://www.svetlana.com/docs/TechBulletins/TB.html
> i need some help i tried to download this but it will not work can
> someone else try or do you have it on file somewhere and could you email
> it to me?
> thanks chris NI4L
>
> --
>
> NI4L CUSTOM RESONANT DIPOLE
> LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
> Made with the same components used by our military forces today
> Custom made to YOUR FREQUENCY of operation
> Let me take the hassle out of making a RESONANT DIPOLE for you.
> Click here for more info... http://www.angelfire.com/nb/ni4l/

2812. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 17:31:40 UTC
From: Gary - KJ6Q <davison7@gte.net>
Message-ID: <0Mjt8.745$I64.564@nwrddc02.gnilink.net>
Source record: 44854
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

SAVE your TIME, MONEY, and EFFORT!

That article, like every OTHER one I've read on the subject, involves LOTS of effort, money and
contortion - and leaves you with an amp that is a butchered monstrosity that will deliver about the
same output as a stock Heathkit SB-200 or Yaesu 2100B that can usually be bought for LESS than the
cost to modify the Dentron 2500...

According to the pointed to article, the BEST observed OUTPUT power AFTER modification, was 840
watts - MY Dentron 2500B will put out 2KW into my dummy load any time, any day! The swapping of tube
types proposed by such articles are HARDLY to be considered a valid "improvement", OR a reasonable
method to ressurrect a 2500B...

I *am* surprised that some enterprising soul hasn't tried swapping in the more easily obtained
572B's - they operate at the same voltages, current and drive levels as the 8875's, use the same
type and placement of cooling, and it LOOKS as though they would fit in the provided space. If and
when MY 8875's fail, I'd be inclined to try the 572B's - but NEVER tubes like that article suggests...

--
Gary - KJ6Q
****
Two things we'll never see:
1. Perpetual motion...
2. A liberal Democrat complaining
about "Too much government"

"NI4L" <ni4l@charter.net> wrote in message news:3CB5BF91.D4917111@charter.net...
> New Life for Dentron MLA2500s
> (QST May 96 pg.45-48)
> MLA2500b.zip MLA 2500A/4CX800A Conversion package including
> builders' details, ARRL Lab test data for all nine HF bands and
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> photos of the author's modified amplifier. This is a "zipped" file
> 898K in size.
> (Does not include actual article)
> http://www.svetlana.com/docs/TechBulletins/TB.html

> i need some help i tried to download this but it will not work can
> someone else try or do you have it on file somewhere and could you email
> it to me?
> thanks chris NI4L
>
> --
>
> NI4L CUSTOM RESONANT DIPOLE
> LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
> Made with the same components used by our military forces today
> Custom made to YOUR FREQUENCY of operation
> Let me take the hassle out of making a RESONANT DIPOLE for you.
> Click here for more info... http://www.angelfire.com/nb/ni4l/
>
>

2813. Re: noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 17:35:00 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3CB5C9B1.71A2B1FB@bellatlantic.net>
Source record: 44855
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

AB Brown wrote:

> Currently, I am using two amateur radios for communicating: one is the Icom
> 718 and the other, strictly for 10 meters, is an older Realistic HTX-100. I
> have used the HTX-100 for about 5 years now and I just obtained the Icom
> less than 6 months ago. I am puzzled by something though that I was
> wondering if anyone could address- the noise blanker on the HTX is FAR
> superior to the one on the Icom. I am wondering why? The Icom was a lot
> more expensive and I just figured it would have a better blanker. It has AF
> DSP option, which I tried, and was disappointed. In every case on 10
> meters, the HTX receives better due to blanked noise effectiveness.
>
> I doubt I could internally modify the Icom's blanker for better performance
> so I am wondering if I could add an external, synchronous (or other ?) type
> noise blanker at the antenna input. I have read a few things about this
> type of blanker and, apparently by using noise generators, you can match the
> phase of incoming noise and cancel it out. Any suggestions for a blanker,
> either internal or external? I understand the synchronous type is better at
> lower Mhz, but will it work for 10/15 meters?
>
> I believe the main sources of noise at my QTH are computer (of course) and
> pole transformer noise. The computer noise is easily solved (by turning off
> my monitor) but I have experienced the transformer noise for many years, and
> the HTX blanker always nullified it.
>
> Appreciate any suggestions from the groups.
>
> Thanks,
> AB

It very well may be that your ICOM "hears better" than the
HTX-100. If it "hears better" it will "hear" noise at a level
below what the HTX can "hear". End result: the HTX
sounds better - but it misses the weak ones that the ICOM
"hears".

On a quiet band, the pre-amps in my 746 are great - but if
the band is noisy, I find that turning them off makes the radio
sound much better. Bottom line - there may be more noise to
blank due to greater sensitivity in the ICOM then in the HTX.
I have neither of the rigs you mention, so I'm only pointing
out a possibility. For all I know, the HTX may "hear" better
than the ICOM.

2814. BCD push-button switches

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 18:58:44 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <N5JcyTOkzdt8EwSc@fslife.co.uk>
Source record: 44857

Does anyone know of an inexpensive or surplus source for these?

I require around 100 pcs for a synth project.

Don't mention Cherry as these are nice but way too expensive.

Many thanks

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

2815. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 19:01:28 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CB5DD9C.3004@pop.removethistomailme.net>
Source record: 44856

Ed Bailen wrote:
>
> I don't quite understand what form of transmission you are trying to
> describe? PWM is a defined form of modulation. It is no more
> amplitude modulated than CW is.

Oversimplification: if you integrate a PWM signal with the appropriate
filter, you get a controllable amplitude level.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2816. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 19:28:05 UTC
From: Duncan Clark <NEWS@[127.0.0.1]>
Message-ID: <kNsLl0CFPet8EwlP@ntlworld.com>
Source record: 44858
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

In message <3CB5BF91.D4917111@charter.net>, NI4L <ni4l@charter.net>
writes
> i need some help i tried to download this but it will not work can
>someone else try or do you have it on file somewhere and could you
>email
>it to me?

Easy but you have do a bit of abstract thinking and pray.

Take the file name, mla2500b.zip, and search for it using say Google,
http://www.google.com.

Results 1 - 7 of about 11. Search took 0.07 seconds

I could download it from:

http://www2.arrl.org/files/qst-binaries/

Duncan
G4ELJ
--
Support bacteria. They are the only culture some people have.

Duncan Clark

2817. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 19:34:25 UTC
From: "Kenneth D. Grimm, K4XL" <kgrimm@adelphia.invalid>
Message-ID: <etobbuoulc4qgde62asbr92la9f6m05hb2@4ax.com>
Source record: 44859
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

>http://www.svetlana.com/docs/TechBulletins/TB.html
> i need some help i tried to download this but it will not work can
>someone else try or do you have it on file somewhere and could you email
>it to me?
>thanks chris NI4L

The ftp site that Svetlana has listed (oak.oakland.edu) seems to be
down. Odd, too, since it has been operating since way before the web
was invented!
What you are looking for is a file called mla2500b.zip. I think you
will find it at the following address:
http://ring.omp.ad.jp/pub/misc/ham/funet/arrl/qst-binaries/ or at

http://ring.tains.tohoku.ac.jp/pub/misc/ham/funet/arrl/qst-binaries/

Good luck with your conversion.

73,

Ken K4XL - Replace "invalid" with "net" to reply.
*** BoatAnchor Manual Archive ***
On the web at http://bama.sbc.edu or
FTP site info: bama.sbc.edu login: anonymous p/w: youremailadr

2818. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 19:48:20 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3CB5E884.1C78C36D@charter.net>
Source record: 44860
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

hi i was able to download it from one of the new places listed thank you.
Has anyone tried this and if so what was the outcome. Anyone have any better
ideas?
chris NI4L

"Kenneth D. Grimm, K4XL" wrote:

> >http://www.svetlana.com/docs/TechBulletins/TB.html
> > i need some help i tried to download this but it will not work can
> >someone else try or do you have it on file somewhere and could you email
> >it to me?
> >thanks chris NI4L
>
> The ftp site that Svetlana has listed (oak.oakland.edu) seems to be
> down. Odd, too, since it has been operating since way before the web
> was invented!
> What you are looking for is a file called mla2500b.zip. I think you
> will find it at the following address:
> http://ring.omp.ad.jp/pub/misc/ham/funet/arrl/qst-binaries/ or at
>
> http://ring.tains.tohoku.ac.jp/pub/misc/ham/funet/arrl/qst-binaries/
>
> Good luck with your conversion.
>
> 73,
>
> Ken K4XL - Replace "invalid" with "net" to reply.
> *** BoatAnchor Manual Archive ***
> On the web at http://bama.sbc.edu or
> FTP site info: bama.sbc.edu login: anonymous p/w: youremailadr

--

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2819. Re: WTB MLA2500 parts rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 19:51:38 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3CB5E94A.CF5EA254@charter.net>
Source record: 44861

Hi James
what do you have going on over there? are you rebuilding it or doing a
conversion of sorts?
chris NI4L

James Skalski wrote:

> I am looking for a MLA2500 parts radio. No power supply needed.
> Just the caps and bandswitch need to be intact for use.
> --
> 73,
>
> Jim n2go

--

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Custom made to YOUR FREQUENCY of operation
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Click here for more info... http://www.angelfire.com/nb/ni4l/

2820. Re: Synthesizer Spur Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 21:04:32 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <l4ubbuceeus27ed7rids1grmp3f4u86ics@4ax.com>
Source record: 44862

John:

I can report success. The layout with separate VCO and phase detector chips works quite well.

Other than harmonics of the VCO, all spurs are at least -65 dBc, and that's only one pair of spurs that I can cause to go right into the noise by slightly changing the wire dress of the 10 KHz reference. Everything else is below -75 dBC.

I received my 10240 crystals, so I now have real 10 KHz steps, and see very good lock up over the 480 KHz - 1990 KHz range.

I used a loop filter that I had calculated using the Philips datasheet, but could not get to work consistently with the other layout. There must be some wierd parasitic coupling in my original layout, some of which must be parasitics in the 74CD4046 chip itself, based on the partial-assembly measurements I made.

I haven't looked at close-in phase noise, other than with the spectrum analyzer.

Thanks again for the assistance. Next step is to build a low power transmitter and AM modulator.

Jack K8ZOA

2821. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 22:15:41 UTC
From: Gary - KJ6Q <davison7@gte.net>
Message-ID: <hWnt8.1863$I64.253@nwrddc02.gnilink.net>
Source record: 44863
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Just carefully check the claimed power output AFTER the mods
suggested - and compare them with the 2 KW the STOCK Dentron's do -
THAT alone should convince you of the validity of the "conversion"...

There are FAR better ways to spend yer time and money than on a
"conversion" that leaves you with an amp the now only has about the
same OUTPUT as a stock SB-200 or similar amp that can be bought for
LESS than the cost of the conversion of the 2500B...

--
Gary - KJ6Q
= = = = = = = =

"NI4L" <ni4l@charter.net> wrote in message
news:3CB5E884.1C78C36D@charter.net...
> hi i was able to download it from one of the new places listed thank
you.
> Has anyone tried this and if so what was the outcome. Anyone have
any better
> ideas?
> chris NI4L
>
> "Kenneth D. Grimm, K4XL" wrote:
>
> > >http://www.svetlana.com/docs/TechBulletins/TB.html
> > > i need some help i tried to download this but it will not work
can
> > >someone else try or do you have it on file somewhere and could
you email
> > >it to me?
> > >thanks chris NI4L
> >
> > The ftp site that Svetlana has listed (oak.oakland.edu) seems to
be
> > down. Odd, too, since it has been operating since way before the
web
> > was invented!
> > What you are looking for is a file called mla2500b.zip. I think
you
> > will find it at the following address:
> > http://ring.omp.ad.jp/pub/misc/ham/funet/arrl/qst-binaries/ or at
> >
> >
http://ring.tains.tohoku.ac.jp/pub/misc/ham/funet/arrl/qst-binaries/

> >
> > Good luck with your conversion.
> >
> > 73,
> >
> > Ken K4XL - Replace "invalid" with "net" to reply.
> > *** BoatAnchor Manual Archive ***
> > On the web at http://bama.sbc.edu or
> > FTP site info: bama.sbc.edu login: anonymous p/w: youremailadr
>
> --
>
> NI4L CUSTOM RESONANT DIPOLE
> LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
> Made with the same components used by our military forces today
> Custom made to YOUR FREQUENCY of operation
> Let me take the hassle out of making a RESONANT DIPOLE for you.
> Click here for more info... http://www.angelfire.com/nb/ni4l/
>
>

2822. Repair for Boonton 9200 RF Voltmeter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 22:27:08 UTC
From: Andy Brinkley <andy@brinkleyelectronics.com>
Message-ID: <3CB60C50.9311F9B4@brinkleyelectronics.com>
Source record: 44864

Anyone have a service manual or are familiar with the Boonton 9200 Rf voltmeter? Picked one up on e-bay but when it powers up all of the LED's come on and stay on.

Thanks for any assistance

Andy

NC Certified Firefighter III / Instructor II / EMT-A
FCC Licensed Technician / Amateur Call NC4AB

2823. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 22:39:12 UTC
From: Bill & Suzie Whatley <spud286@attbi.com>
Message-ID: <kgot8.5772$GI6.2239@sccrnsc01>
Source record: 44865

Many commercial AM broadcast transmitters now use this method.

There is lots of AM activity on the ham bands and quite a few are already
using PWM
to produce the AM.

Check www.amfone.net for an article on this.

73
WA5VRL
Willis

2824. Re: Synthesizer Spur Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-11 23:33:22 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CB61D55.7F3A@pop.removethistomailme.net>
Source record: 44866

Jack Smith wrote:
>
> John:
>
> I can report success. The layout with separate VCO and phase detector
> chips works quite well.
>
> Other than harmonics of the VCO, all spurs are at least -65 dBc, and
> that's only one pair of spurs that I can cause to go right into the
> noise by slightly changing the wire dress of the 10 KHz reference.
> Everything else is below -75 dBC.
>
> I received my 10240 crystals, so I now have real 10 KHz steps, and see
> very good lock up over the 480 KHz - 1990 KHz range.
>
> I used a loop filter that I had calculated using the Philips
> datasheet, but could not get to work consistently with the other
> layout. There must be some wierd parasitic coupling in my original
> layout, some of which must be parasitics in the 74CD4046 chip itself,
> based on the partial-assembly measurements I made.

Cool, sounds like you're pretty close to optimal with this design.
Nothing in the world wrong with making an educated guess at the
capacitor values and using pots to find the best resistor values, as
long as you have an SA and you know what you're looking at. You should
grab a copy of Banerjee's book if you plan to do much more
experimentation with PLLs -- he has lots of examples (some of which
don't even have typos).

> I haven't looked at close-in phase noise, other than with the spectrum
> analyzer.

If it sounds good in a receiver with a narrow CW filter, then you're
done.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2825. Re: Synthesizer Spur Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 00:03:17 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <to8cbuc7r2i6qi35d6730tv2hkcfbs2bc3@4ax.com>
Source record: 44868

>
>Cool, sounds like you're pretty close to optimal with this design.
>Nothing in the world wrong with making an educated guess at the
>capacitor values and using pots to find the best resistor values, as
>long as you have an SA and you know what you're looking at. You should
>grab a copy of Banerjee's book if you plan to do much more
>experimentation with PLLs -- he has lots of examples (some of which
>don't even have typos).

The loop filter was one that I calculated, didn't have to make any
adjustments to it, other than adding one shunt C to reduce the noise.

I did download Banerjee's book and printed it for more detailed study.
Thanks for the reference to it.
>
>> I haven't looked at close-in phase noise, other than with the spectrum
>> analyzer.
>
>If it sounds good in a receiver with a narrow CW filter, then you're
>done.

I've been listening to it with the Racal 6790/GM that I keep in the
workshop. It sounds reasonably good, but will stick an attenuator in
the antenna lead to drop the signal level down to a more reasonable
level and tune around some more.
>
>-- jm
>
>---
>http://www.qsl.net/ke5fx
>Note: My E-mail address has been altered to avoid spam
>---

2826. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 00:44:46 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <a95alu$j4l$0@208.206.142.99>
Source record: 44867
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Gary - KJ6Q wrote:
>
> Just carefully check the claimed power output AFTER the mods
> suggested - and compare them with the 2 KW the STOCK Dentron's do -
> THAT alone should convince you of the validity of the "conversion"...
>
> There are FAR better ways to spend yer time and money than on a
> "conversion" that leaves you with an amp the now only has about the
> same OUTPUT as a stock SB-200 or similar amp that can be bought for
> LESS than the cost of the conversion of the 2500B...
>

Something isn't right. The 3cx400 is reported to be equal to the 8874 which is identical electrically to the 8875, the original tubes in the MLA2500. What is it about the conversion that drops the power? It shouldn't.

If MLA2500 owners would use them a bit more carefully they wouldn't eat tubes. Of course it would help if the manual had instructed users to keep the grid current down to a VERY LOW value. Instead they allowed 100 mils, and that tube just won't handle it longterm. IIRC the specs for the 8874/8875 series show 4 ma grid current continuous. I have a MLAS2500, and keep the meter switch on the 'grid' setting. If anything changes that causes *any* observable grid current to flow I want to know about it-normal tuning is for zero grid current here. I've had this MLA2500 for over 15 years and the original tubes are still virtually as good as new. I like it because it is very compact for the power output and it covers all bands 160 through 10 meters, since it was built before the 10 meter amplifier ban.

Dick W0EX

2827. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 01:55:38 UTC
From: Gary - KJ6Q <davison7@gte.net>
Message-ID: <u8rt8.2499$I64.233@nwrddc02.gnilink.net>
Source record: 44869
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

SO, a quick and simple question - the "conversion article" claims a MAXIMUM power out of 840 watts
AFTER switching to the 400's - how much power can YOU get outta YOUR stock 2500B?

I can get 2 kw outta MINE - so I agree, something IS seriously WRONG with those 2500B conversions - so why MAKE the conversion for so POOR a return in efficiency - as clearly indicated
right in the conversion articles themselves?

--
Gary - KJ6Q
****
Two things we'll never see:
1. Perpetual motion...
2. A liberal Democrat complaining
about "Too much government"
"Dick Carroll" <dixie@townsqr.com> wrote in message news:a95alu$j4l$0@208.206.142.99...
>
>
> Gary - KJ6Q wrote:
> >
> > Just carefully check the claimed power output AFTER the mods
> > suggested - and compare them with the 2 KW the STOCK Dentron's do -
> > THAT alone should convince you of the validity of the "conversion"...
> >
> > There are FAR better ways to spend yer time and money than on a
> > "conversion" that leaves you with an amp the now only has about the
> > same OUTPUT as a stock SB-200 or similar amp that can be bought for
> > LESS than the cost of the conversion of the 2500B...
> >
>
>
> Something isn't right. The 3cx400 is reported to be equal to the 8874
> which is identical electrically to the 8875, the original tubes in the
> MLA2500. What is it about the conversion that drops the power? It
> shouldn't.
>
> If MLA2500 owners would use them a bit more carefully they wouldn't eat
> tubes. Of course it would help if the manual had instructed users to
> keep the grid current down to a VERY LOW value. Instead they allowed 100
> mils, and that tube just won't handle it longterm. IIRC the specs for
> the 8874/8875 series show 4 ma grid current continuous. I have a
> MLAS2500, and keep the meter switch on the 'grid' setting. If anything
> changes that causes *any* observable grid current to flow I want to know

> about it-normal tuning is for zero grid current here. I've had this
> MLA2500 for over 15 years and the original tubes are still virtually as
> good as new. I like it because it is very compact for the power output
> and it covers all bands 160 through 10 meters, since it was built before
> the 10 meter amplifier ban.
>
> Dick W0EX

2828. MP3 CW to Text converter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 03:39:43 UTC
From: wa0goz@arrl.net
Message-ID: <3CB656FF.2A93@arrl.net>
Source record: 44870

Does anyone know of a program to convert MP3 CW files into text. I want to convert them to text and then re-convert them to MP3's only at at different frequency.

Thanks and 73

Henry WA0GOZ

2829. Re: MP3 CW to Text converter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 04:00:11 UTC
From: ".Bill M." <TheRealExray@netscape.net>
Message-ID: <3CB65BCB.BA562CA0@netscape.net>
Source record: 44871

wa0goz@arrl.net wrote:
>
> Does anyone know of a program to convert MP3 CW files into text. I want
> to convert them to text and then re-convert them to MP3's only at at
> different frequency.
>
> Thanks and 73
>
> Henry WA0GOZ

Do you actually need the 'text' step? There are programs that you can
use to convert the mp3 freqs directly. If its a matter of being able to
single out what you're converting, most of these things have editing
features so that you can select certain portions of the mp3, etc.
-Bill

2830. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 05:30:09 UTC
From: Eric Schumacher <WB6KCN@pacbell.net>
Message-ID: <Bhut8.909$IH.626412795@newssvr21.news.prodigy.com>
Source record: 44872

Its called class D

Often used for audio amps these days

Eric WB6KCN

"Bill & Suzie Whatley" <spud286@attbi.com> wrote in message
news:kgot8.5772$Gl6.2239@sccrnsc01...
> Many commercial AM broadcast transmitters now use this method.
>
> There is lots of AM activity on the ham bands and quite a few are already
> using PWM
> to produce the AM.
>
> Check www.amfone.net for an article on this.
>
> 73
> WA5VRL
> Willis
>
>

2831. Re: MP3 CW to Text converter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 06:27:48 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <4gscbu47uild3rp0hfre5b68t6f3ocsjfs@4ax.com>
Source record: 44873

On Fri, 12 Apr 2002 00:00:11 -0400, ".Bill M."
<TheRealExray@netscape.net> wrote:

>Do you actually need the 'text' step? There are programs that you can
>use to convert the mp3 freqs directly. If its a matter of being able to
>single out what you're converting, most of these things have editing
>features so that you can select certain portions of the mp3, etc.

While this conversion may work quite well when the desired CW signal
is the only signal in the recording or at least the strongest signal
in the recording, strange things can happen with psyco-acoustically
coded recordings, such as MP3.

These psyco-acoustical compression methods discards a lot of material
that the ear is not supposed to hear, e.g. due to masking by a nearby
strong signal.

Assume that there is a strong undesired carrier or CW signal at 3000
Hz and a weak desired CW signal at 3200 Hz, i.e. far less than an
octave from each other in the same critical frequency band, the human
might not hear the weaker signal and MP3 encoder might completely
remove the signal. Now converting this signal down by multiplying the
signal with a 2800 Hz sine wave (the "BFO"), the undesired signal is
at 200 Hz and the desired CW signal at 400 Hz, they are one octave
part and definitively in a separate critical frequency band and thus,
both signals are audible.

If the original MP3 recording with a high compression ratio had
discarded the "useless" 3200 Hz signal from the recording, it would
not be available after shifting down to a lower frequency. Thus, it
is very important to use uncompressed or lossless compression (e.g.
zip) recordings are used if some postprocessing, such as very narrow
band filtering or frequency shifting is used.

Paul OH3LWR

2832. Re: Repair for Boonton 9200 RF Voltmeter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 06:54:13 UTC
From: "A. Punnett" <ajpunnett@sympatico.ca>
Message-ID: <3CB68495.ED50236F@sympatico.ca>
Source record: 44874

Sounds like the processor is not resetting. Also check the power
supplies first.

2833. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 07:11:15 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <T6krisWTiot8Ewgy@fslife.co.uk>
Source record: 44886

Eric,

>Its called class D
>
>> Check www.amfone.net for an article on this.

Not just D but E & F.

Most e3very AM broadcast transmitter manufacturer now uses PWM, or PDM,
some have gone totally digital.

The only AM transmitters not to use this form of modulator tend to be
those few made for low power, under 100w, such as those by Tesla and
LPB.

They use either low level and add a linear or in the case of the Tesla
they use Progressive Series modulation.

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

2834. Re: MP3 CW to Text converter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 07:20:51 UTC
From: ".Bill M." <TheRealExray@netscape.net>
Message-ID: <3CB68AD3.6AD1B435@netscape.net>
Source record: 44875

Paul Keinanen wrote:
>
> On Fri, 12 Apr 2002 00:00:11 -0400, ".Bill M."
> <TheRealExray@netscape.net> wrote:
>
> >Do you actually need the 'text' step? There are programs that you can
> >use to convert the mp3 freqs directly. If its a matter of being able to
> >single out what you're converting, most of these things have editing
> >features so that you can select certain portions of the mp3, etc.
>
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> is the only signal in the recording or at least the strongest signal
> in the recording, strange things can happen with psyco-acoustically
> coded recordings, such as MP3.
>
> These psyco-acoustical compression methods discards a lot of material
> that the ear is not supposed to hear, e.g. due to masking by a nearby
> strong signal.
>
> Assume that there is a strong undesired carrier or CW signal at 3000
> Hz and a weak desired CW signal at 3200 Hz, i.e. far less than an
> octave from each other in the same critical frequency band, the human
> might not hear the weaker signal and MP3 encoder might completely
> remove the signal. Now converting this signal down by multiplying the
> signal with a 2800 Hz sine wave (the "BFO"), the undesired signal is
> at 200 Hz and the desired CW signal at 400 Hz, they are one octave
> part and definitively in a separate critical frequency band and thus,
> both signals are audible.
>
> If the original MP3 recording with a high compression ratio had
> discarded the "useless" 3200 Hz signal from the recording, it would
> not be available after shifting down to a lower frequency. Thus, it
> is very important to use uncompressed or lossless compression (e.g.
> zip) recordings are used if some postprocessing, such as very narrow
> band filtering or frequency shifting is used.
>
> Paul OH3LWR

Whew! Maybe the original poster should explain in more detail what it
is that he wants to do.
-ex

2835. Re: MP3 CW to Text converter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 09:13:33 UTC
From: "Sverre Holm (LA3ZA)" <la3za@qsl.net>
Message-ID: <1zxt8.4215$cm1.126922@news4.ulv.nextra.no>
Source record: 44876

> > Does anyone know of a program to convert MP3 CW files into text. I want
> > to convert them to text and then re-convert them to MP3's only at at
> > different frequency.
> >
> > Thanks and 73
> >
> > Henry WA0GOZ
>
> Do you actually need the 'text' step? There are programs that you can
> use to convert the mp3 freqs directly.

Does anyone have any pointers to where such programs can be found?

73, Sverre LA3ZA

2836. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 11:19:46 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <a96fsigmp0@208.206.142.113>
Source record: 44877
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Gary - KJ6Q wrote:
>
> SO, a quick and simple question - the "conversion article" claims a MAXIMUM power out of 840 watts
> AFTER switching to the 400's - how much power can YOU get outta YOUR stock 2500B?

Mine is not a B model, but it never did output 2KW, more like 1.5,
which is the legal limit anyway. And I've tried a brand new set of Eimac
tubes in it with the output nearly the exact same 1.5KW. I used a
separate wattmeter and dummy load for the test. Internal wattmeters seem
to rarely be very accurate.

>
> *I* can get 2 kw outta MINE - so I agree, something IS seriously WRONG with those 2500B
> conversions - so why MAKE the conversion for so POOR a return in efficiency - as clearly indicated
> right in the conversion articles themselves?

Certainly no argument from me, but if I was faced with buying a pair of
finals for it I might view it differently.
I still think the answer is to run the amp right in the first place and
not fry the final tube grids. This won't help after the fact, of course.

2837. Looking for Source to buy TSL236 Light-Frequency Converter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 11:58:49 UTC
From: martin@okstate.edu
Message-ID: <a96i5p$1fj$1@hydrogen.cis.okstate.edu>
Source record: 44878

Texas Instruments makes a neat chip called the TSL236
which is a light intensity to frequency converter. Does anybody
know where one can buy small quantities of them? I have an idea
for an application which might make a good magazine article or
even an interesting posting on a news group like this, but I need
to be able to suggest where one can procure these chips if the
article is to be of any use at all. Thanks for any
constructive ideas.
--

Martin McCormick WB5AGZ Stillwater, OK
OSU Center for Computing and Information Services Network Operations Group

2838. FS: GENERAL ELECTRIC Power Transformer for 200-300 Watt Solid State Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 12:08:12 UTC
From: mnowlen@yahoo.com
Message-ID: <3cb6dd66.647246981@news.va.comcast.giganews.com>
Source record: 44879
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew,sci.electronics.components,rec.audio.marketplace

GENERAL ELECTRIC TF4RX02NA Power Transformer

Has four seperate 32 volt @ 4 Amp windings. Connect in series for 128
Volts or +/- 64 Volts Center Tapped. Primary tapped for 109,
115,120,126, and 132 Volts. Potted in military style case with
terminals. Weight: 20 Lbs. Great for 200-300 Watt Solid State Amp.

Picture at:
http://mywebpages.comcast.net/mnowlen/ge-power-trans.jpg

Very Good Condition, Tested and working.
Two available.
$50 each + Shipping
Send zip code for estimate

Please reply via e-mail or telephone

Thanks for reading.

Mike Nowlen
mnowlen@yahoo.com
(703) 716-1363

2839. Re: Dan's Small Parts - no answer, no catalog update???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 13:30:04 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <a96ngs$6vl$0@208.206.142.113>
Source record: 44880

"atec77(nospam)" wrote:
>
> I find this kinda odd. I can send anywhere in my little country (AU) for
> around 4$ us overnight. one side to the other , and frankly I hate our
> postal service. maybe its all the nutters you have working in yours ?

Nope, it's just the 'system'. On the established routes US Mail
service is quite good. It's the 'out of the way' destinations which have
a valid claim to 'snail mail' service. Who knows where a package goes
enroute?

2840. Re: MP3 CW to Text converter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 13:52:22 UTC
From: john graesser <graesser@tca.net>
Message-ID: <ubdpgurc5iti54@corp.supernews.com>
Source record: 44882

<wa0goz@arrl.net> wrote in message news:3CB656FF.2A93@arrl.net...
> Does anyone know of a program to convert MP3 CW files into text. I want
> to convert them to text and then re-convert them to MP3's only at at
> different frequency.
>
> Thanks and 73
>
> Henry WA0GOZ

I suppose you could hook the output of your sound card playing the mp3 to the input and use cwget to convert to text. It might be better if you have two computers if your system isn't capable of running the soundcard full duplex.

If the cw was originally machine generated, I have yet to see cwget not convert it. I use it to convert ARRL bulletins and my antenna/radio combo is far from good.
thanks, John.
KC5DWD

2841. Re: noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 13:57:10 UTC
From: Ed Juge/NM <ed_juge@zianet.com>
Message-ID: <3cb6e3ff.0@oracle.zianet.com>
Source record: 44881
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

In reading a lot on the Icom reflector, I have found consistent comments indicating the problem is Icom's engineers simply do NOT know how to build a really effective noise blanker! I currently own a 756PRO and it can't hold a candle to the blankers in other radios I've owned including a Kenwood 940, Ten Tec Titan and Yaesu FT-1000D. It's probably the worst HF NB I've used. I have not used the Icom 718 but doubt there is any reason to believe it would be the one exception in their line.

I have seen some incredibly good blankers in RS products.

73... Ed, W5EJ

"AB Brown" <abbrown@nospammail.com> wrote in message
news:a93aas$68n$1@slb1.atl.mindspring.net...
> Currently, I am using two amateur radios for communicating: one is the
Icom
> 718 and the other, strictly for 10 meters, is an older Realistic HTX-100.
I
> have used the HTX-100 for about 5 years now and I just obtained the Icom
> less than 6 months ago. I am puzzled by something though that I was
> wondering if anyone could address- the noise blanker on the HTX is FAR
> superior to the one on the Icom. I am wondering why? The Icom was a lot
> more expensive and I just figured it would have a better blanker. It has
AF
> DSP option, which I tried, and was disappointed. In every case on 10
> meters, the HTX receives better due to blanked noise effectiveness.
>
> I doubt I could internally modify the Icom's blanker for better
performance
> so I am wondering if I could add an external, synchronous (or other ?)
type
> noise blanker at the antenna input. I have read a few things about this
> type of blanker and, apparently by using noise generators, you can match
the
> phase of incoming noise and cancel it out. Any suggestions for a blanker,
> either internal or external? I understand the synchronous type is better
at
> lower Mhz, but will it work for 10/15 meters?
>
> I believe the main sources of noise at my QTH are computer (of course) and
> pole transformer noise. The computer noise is easily solved (by turning
off
> my monitor) but I have experienced the transformer noise for many years,
and

> the HTX blanker always nullified it.
>
> Appreciate any suggestions from the groups.
>
> Thanks,
> AB
>
>

2842. Re: MP3 CW to Text converter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 14:06:37 UTC
From: ".Bill M." <TheRealExray@netscape.net>
Message-ID: <3CB6E9ED.BBFD9725@netscape.net>
Source record: 44883

"Sverre Holm (LA3ZA)" wrote:
>
> > > Does anyone know of a program to convert MP3 CW files into text. I want
> > > to convert them to text and then re-convert them to MP3's only at at
> > > different frequency.
> > >
> > > Thanks and 73
> > >
> > > Henry WA0GOZ
> >
> > Do you actually need the 'text' step? There are programs that you can
> > use to convert the mp3 freqs directly.
>
> Does anyone have any pointers to where such programs can be found?
>
> 73, Sverre LA3ZA

Here's a few that I've tried: CoolEdit, Audacity, WinADR, ACMStation.
The features vary a bit...CoolEdit is by far the best. Trial versions
can be found at the places like shareware.com, etc.

-Bill WX4A

2843. Re: noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 14:47:10 UTC
From: troglodite@aol.com
Message-ID: <20020412104710.04403.00005097@mb-fi.aol.com>
Source record: 44884

>In reading a lot on the Icom reflector, I have found consistent comments
>indicating the problem is Icom's engineers simply do NOT know how to build a
>really effective noise blanker!

(stuff deleted)

>I have seen some incredibly good blankers in RS products.

Ed,

No doubt you realize the irony in these statements, since the RS stuff is built in Japan. The difference is .. communication. I work for a company that is owned by a Japanese corporation. The product is designed here, but whether the end result is close to the intent is a matter of communication between the US and Japanese divisions. This is the key, and is not a simple matter. Put simply, unless you can get them to understand what you want, you have a zero chance of getting it.

Doug Moore

2844. Re: MP3 CW to Text converter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 15:15:13 UTC
From: wa0goz@arrl.net
Message-ID: <3CB6FA01.16BC@arrl.net>
Source record: 44885

.Bill M. wrote:

> Whew! Maybe the original poster should explain in more detail what it
> is that he wants to do.

I'll try. I have some MP3 CW recordings which are a mix of CW at different frequencies, that is, they change frequencies every so often. I would like to make them all the same frequency. A frequency of my choosing. I thought if I could get them back to text format, I could use a program I have for making them into new MP3 recordings and they would all be at the frequency I wanted.

Hope this helps.

Thanks and 73,

Henry WA0GOZ

2845. Re: noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 16:01:41 UTC
From: Bill Turner <w7ti@dslextreme.com>
Message-ID: <stvdbu477t63r0s42h6h97hcsuaeljvknq@4ax.com>
Source record: 44887
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Fri, 12 Apr 2002 06:57:10 -0700, "Ed Juge/NM" <ed_juge@zianet.com>
wrote:

>In reading a lot on the Icom reflector, I have found consistent comments
>indicating the problem is Icom's engineers simply do NOT know how to build a
>really effective noise blanker!

True for Kenwood too. I have an old Uniden 10 meter rig which has the
finest noise blanker I've ever seen for ignition noise. I've compared
it against a half dozen Icom and Kenwood rigs and it beats them all by
far.

Designing noise blankers must be part science, part art and part magic.

Bill, W7TI

2846. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 16:01:59 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <ube17f3mmrj3e@corp.supernews.com>
Source record: 44888

John --

I'm not understanding. Suppose I have a transmitter that is putting out a true on-off pulse width modulated signal. You mention an "appropriate filter". Are you talking about this filter at the transmitter end or the receiver end? And if I do modulate a transmitter with PWM, what does a standard AM receiver using either envelope detection or some other scheme see? Is it transparent to the receiver the modulation technique or is it chopped at the other end?

Jim

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message news:3CB5DD9C.3004@pop.removethistomailme.net...

> Oversimplification: if you integrate a PWM signal with the appropriate
> filter, you get a controllable amplitude level.

2847. Re: MP3 CW to Text converter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 16:14:59 UTC
From: ".Bill M." <TheRealExray@netscape.net>
Message-ID: <3CB70803.82830498@netscape.net>
Source record: 44889

wa0goz@arrl.net wrote:
>
> .Bill M. wrote:
>
> > Whew! Maybe the original poster should explain in more detail what it
> > is that he wants to do.
>
> I'll try. I have some MP3 CW recordings which are a mix of CW at
> different frequencies, that is, they change frequencies every so often.
> I would like to make them all the same frequency. A frequency of my
> choosing. I thought if I could get them back to text format, I could
> use a program I have for making them into new MP3 recordings and they
> would all be at the frequency I wanted.
>
> Hope this helps.
>
> Thanks and 73,
>
> Henry WA0GOZ

Oh, I get it now. You're speaking in terms of actual audio frequencies
instead of sampling freqs.
Hmmm, I know you can fiddle with the sampling rates and stuff to slow
down/speed up a recording but I can't think of any easy way to
'calibrate' the random tones to a standard norm.
I have seen encoders that will read text and send CW but can't recall a
name. Ones that convert CW to text are pretty common as I see them
mentioned quite often. Some of the guys on rec.radio.shortwave use them
for copying CW, RTTY, fax, etc. You might ask there for some
recommendations.
Good luck with your project.
-Bill WX4A

2848. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 17:21:20 UTC
From: tongaloa <tongaloa@alltel.net>
Message-ID: <a9752t$oc5$1@iac5.navix.net>
Source record: 44890
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

From the Svetlana 4cx400 conversion notes, and
some research into the 2500B specifications:

2500B power transformer is good for 750 W CCS. With 2 x 4cx400
the 840 W reported is single tone PEP translates to 595 W RMS
In consideration of the typical 50% over CCS that one can usually get out of
a transformer in ICAS (1120 W) this translates to about 52% efficiency, and
agrees with most CW specs for ham amps.

The GI7B conversion is reported to yield 1200 W out (two tone)
or 600 W RMS. Same power!

I bet the 2 KW output reported, corresponds to voice peaks and
not the single tone it is compared to. Voice has a higher peak to average
ratio than two tone so 2 KW peak seems pretty reasonable.

-bob
WB4MNF

"Gary - KJ6Q" <davison7@gte.net> wrote in message
news:0Mjt8.745$I64.564@nwrddc02.gnilink.net...
> SAVE your TIME, MONEY, and EFFORT!
>
> That article, like every OTHER one I've read on the subject, involves LOTS
of effort, money and
> contortion - and leaves you with an amp that is a butchered monstrosity
that will deliver about the
> same output as a stock Heathkit SB-200 or Yaesu 2100B that can usually be
bought for LESS than the
> cost to modify the Dentron 2500...
>
> According to the pointed to article, the BEST observed OUTPUT power AFTER
modification, was 840
> watts - MY Dentron 2500B will put out 2KW into my dummy load any time, any
day! The swapping of tube
> types proposed by such articles are HARDLY to be considered a valid
"improvement", OR a reasonable
> method to ressurrect a 2500B...
>
> I *am* surprised that some enterprising soul hasn't tried swapping in the
more easily obtained
> 572B's - they operate at the same voltages, current and drive levels as
the 8875's, use the same
> type and placement of cooling, and it LOOKS as though they would fit in
the provided space. If and

> when MY 8875's fail, I'd be inclined to try the 572B's - but NEVER tubes
like that article
> suggests...
>
> --
> Gary - KJ6Q
> **********
> Two things we'll never see:
> 1. Perpetual motion...
> 2. A liberal Democrat complaining
> about "Too much government"
>
> "NI4L" <ni4l@charter.net> wrote in message
news:3CB5BF91.D4917111@charter.net...
> > New Life for Dentron MLA2500s
> > (QST May 96 pg.45-48)
> > MLA2500b.zip MLA 2500A/4CX800A Conversion package including
> > builders' details, ARRL Lab test data for all nine HF bands and
> > several
> > photos of the author's modified amplifier. This is a "zipped" file
> > 898K in size.
> > (Does not include actual article)
> > http://www.svetlana.com/docs/TechBulletins/TB.html
> > i need some help i tried to download this but it will not work can
> > someone else try or do you have it on file somewhere and could you email
> > it to me?
> > thanks chris NI4L
> >
> > --

2849. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 17:22:46 UTC
From: tongaloa <tongaloa@alltel.net>
Message-ID: <a9755jokb1@iac5.navix.net>
Source record: 44891

AA4RM is running an EICO 720 this way.

"r.crowley" <rcrowley7@xprt.net> wrote in message
news:ubb7alendr4m63@corp.supernews.com...
> Is this method used anywhere? With modern digital circuitry, it seems
> almost easier to do than traditional methods of amplitude modulation.
> (Assuming appropriate filtering to produce proper sine-wave output, not
> square wave!)
>
> Is there any AM activity on amateur bands anymore?
>
>

2850. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 17:39:13 UTC
From: Gary - KJ6Q <davison7@gte.net>
Message-ID: <5ZEt8.62$93.19@nwrddc04.gnilink.net>
Source record: 44892
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

I suspect 2 major issues create lower than hoped for output in the conversions under discussion -
first is the class of operation they appear to be operating in - which seems to be AB1/AB2 - both
down in efficiency compared to the more common class B operation for linear amplifier operation...
SECOND, is the likelihood that the final tank circuit needs significant tweaking to comphensate for
the different plate impedance of the substituted finals.

2 OTHER inherant, potential issue with those conversions, is the unsatisfactory adaption of cooling
system from the 8875's to the vastly differing system needed for tubes like the 400's and 800's -
the 8875's survive quite nicely with low-pressure, high-volume airflow, while the others desperately
need both high flow rates AND decent flow PRESSURE for adequate cooling under power levels the MLA
2500 was designed to operate - but which the specified muffin fans are NOT capable of! NEXT on the
list is the specified need, common in grid-driven amps, for LOW-LEVEL drive in those conversions,
which while possible in most late model transceivers, is VERY likely to lead to unwanted impurities
in output as various audio/electronic impurities are NOW being brought up much nearer to the level
of the DESIRED signal for amplification - much like a hifi driver with low output, when the following audio amp is turned up to comphensate, bringing an increased hum and distortion level WITH
it... At the very LEAST, a power deviding T pad SHOULD be used in these cases, rather than merely
relying upon turning down driver output as the only solution.

And finally, we entirely agree on proper loading and driving of the stock 2500 amps - I operate mine
on 220 volt mains, use 50-60 watts drive, and normally show 1250 watts out on an instant reading
peak wattmeter, and RARELY see the faintest trace of grid current - tho it WILL load MUCH higher if
I so desire. It IS a shame these amps don't use tubes more easily obtained - but SO FAR, the
suggested "conversions" leave MUCH to be desired to match the abilities of the stock MLA-2500's

--
Gary - KJ6Q
****
Two things we'll never see:
1. Perpetual motion...
2. A liberal Democrat complaining
about "Too much government"

"Dick Carroll" <dixie@townsqr.com> wrote in message news:a96fsigmp0@208.206.142.113...
>
>
> Gary - KJ6Q wrote:
> >
> > SO, a quick and simple question - the "conversion article" claims a MAXIMUM power out
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watts
> > AFTER switching to the 400's - how much power can YOU get outta YOUR stock 2500B?
>
>
>
> Mine is not a B model, but it never did output 2KW, more like 1.5,
> which is the legal limit anyway. And I've tried a brand new set of Eimac
> tubes in it with the output nearly the exact same 1.5KW. I used a
> separate wattmeter and dummy load for the test. Internal wattmeters seem
> to rarely be very accurate.
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>
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> > *I* can get 2 kw outta MINE - so I agree, something IS seriously WRONG with those 2500B
> > conversions - so why MAKE the conversion for so POOR a return in efficiency - as
clearly
indicated
> > right in the conversion articles themselves?
>
>
> Certainly no argument from me, but if I was faced with buying a pair of
> finals for it I might view it differently.
> I still think the answer is to run the amp right in the first place and
> not fry the final tube grids. This won't help after the fact, of course.

2851. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 17:41:21 UTC
From: Gary - KJ6Q <davison7@gte.net>
Message-ID: <5%Et8.63$93.32@nwrddc04.gnilink.net>
Source record: 44893
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

NOPE, *MY* 2 KW claim is steady carrier, key down... Voice peaks will easily rise to, and
ABOVE that
indicated level...

--
Gary - KJ6Q
****
Two things we'll never see:
1. Perpetual motion...
2. A liberal Democrat complaining
about "Too much government"
"tongaloa" <tongaloa@alltel.net> wrote in message news:a9752t$oc5$1@iac5.navix.net...
> From the Svetlana 4cx400 conversion notes, and
> some research into the 2500B specifications:
>
> 2500B power transformer is good for 750 W CCS. With 2 x 4cx400
> the 840 W reported is single tone PEP translates to 595 W RMS
> In consideration of the typical 50% over CCS that one can usually get out of
> a transformer in ICAS (1120 W) this translates to about 52% efficiency, and
> agrees with most CW specs for ham amps.
>
> The GI7B conversion is reported to yield 1200 W out (two tone)
> or 600 W RMS. Same power!
>
> I bet the 2 KW output reported, corresponds to voice peaks and
> not the single tone it is compared to. Voice has a higher peak to average
> ratio than two tone so 2 KW peak seems pretty reasonable.
>
> -bob
> WB4MNF
>
> "Gary - KJ6Q" <davison7@gte.net> wrote in message
> news:0Mjt8.745$I64.564@nwrddc02.gnilink.net...
> > SAVE your TIME, MONEY, and EFFORT!
> >
> > That article, like every OTHER one I've read on the subject, involves LOTS
> of effort, money and
> > contortion - and leaves you with an amp that is a butchered monstrosity
> that will deliver about the
> > same output as a stock Heathkit SB-200 or Yaesu 2100B that can usually be
> bought for LESS than the
> > cost to modify the Dentron 2500...
> >

> > According to the pointed to article, the BEST observed OUTPUT power AFTER
> modification, was 840
> > watts - MY Dentron 2500B will put out 2KW into my dummy load any time, any
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> > types proposed by such articles are HARDLY to be considered a valid
> "improvement", OR a reasonable
> > method to ressurrect a 2500B...
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> > I *am* surprised that some enterprising soul hasn't tried swapping in the
> more easily obtained
> > 572B's - they operate at the same voltages, current and drive levels as
> the 8875's, use the same
> > type and placement of cooling, and it LOOKS as though they would fit in
> the provided space. If and
> > when MY 8875's fail, I'd be inclined to try the 572B's - but NEVER tubes
> like that article
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> > > builders' details, ARRL Lab test data for all nine HF bands and
> > > several
> > > photos of the author's modified amplifier. This is a "zipped" file
> > > 898K in size.
> > > (Does not include actual article)
> > > http://www.svetlana.com/docs/TechBulletins/TB.html
> > > i need some help i tried to download this but it will not work can
> > > someone else try or do you have it on file somewhere and could you email
> > > it to me?
> > > thanks chris NI4L
> > >
> > > --
>
>

2852. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 17:56:58 UTC
From: Gary - KJ6Q <davison7@gte.net>
Message-ID: <KdFt8.835$bn2.795@nwrddc01.gnilink.net>
Source record: 44894
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

In response to a fella questioning my reference to power output of the Heath SB-200 and Yaesu
2100B - as well as some issues to power supply capabilities - my response...

You're entitled to your opinion - but *I* have actually owned and operated the SB-200, a pair of
Yaesu 2100B's and a Dentron Clipperton L - BOTH amps using a PAIR of 572B's were capable of a best
key-down power out of over 800 watts into a dummy load - the Clipperton, with 4 572's was capable of
over 1600 watts out... NOW, THAT'S actual experience, NOT theory or assumption!

Power supply capabilities, or tube charts are NOT the issue here - the efficiency and ACTUAL
operation of a proposed MLA 2500 "conversion" IS! And I steadfastly maintain that the suggested
conversions are NOT getting the best/most out of the specified tubes, or the original capabilities
of the MLA-2500 - and THAT is what this thread is about!

--
Gary - KJ6Q
****
Two things we'll never see:
1. Perpetual motion...
2. A liberal Democrat complaining
about "Too much government"

2853. Re: noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 18:40:25 UTC
From: raiar@slacc.com.nospam
Message-ID: <3cb727b3.104844815@news.galilei.com>
Source record: 44895
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hi Ed

I hate to admit it, but I have to agree with you as well.
I have an HTX-100 and will use it rather than a Kenwood HF rig, unless the band really gets rough.

I have inline with the HTX100 a very old HyGain Receiver Preamp from the hayday of the CB boom as well. I have found that by keeping the Receiver Gain on the HTX100 turned down to about 1/2 and using the external pre-amp I can pull in stations that fly right by the Kenwood. The HTX100 hears them without the pre-amp with the gain cranked up, but the pre-amp seems to keep the noise to a minimum and brings up only the signal itself, in most cases, needless to say, there are exceptions. I also have a DSP from RS, it's great on CW but almost useless on sideband.

When I take the HTX100 on the road, the NB filters out every speck of ignition noise, including that from other vehicles and trucks around you.

The only NB filter I have found that works better than the ones used in the RS ham gear, was the 'crystal lattice filter' that was found in many Lafayette R&E Chicken Band rigs.

TTUL
Gary

2854. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 18:56:39 UTC
From: gaschafer@attbi.com
Message-ID: <3cb72ce7.13067995@netnews.attbi.com>
Source record: 44896
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

I see a little confusion on PEP and average power. If you put in full carrier (or single tone) and
get 1000 watts output that is 1000 watts average power. Same power on cw. It is also 1000
watts PEP. If you switch to SSB and drive the audio up to full power out you are running 1000
watts PEP. Now the PEP may be slightly higher because the power supply will not sag quite as
much on SSB as it does on CW. You may actually get another 150 or so watts PEP out on
SSB because of the power supply. Your average power out with voice will be in the area of
150 to 300 watts depending on voice characteristics.

With a two tone signal the same amplifier will still put out 1000 watts PEP. The average power
will be 1/2 that or 500 watts average.

The best way to compare outputs is with carrier (single tone). This gives all the power out that
the amp can do. Less a little of course for power supply sag.

Be careful of watt meter readings when comparing amps. All watt meters are not created equal.
I see some claims of 800 watts out of an SB200. If it would in fact put out that much I would
think the 3rd order products would be pretty bad. You would have to overdrive it to get that
much power out.

73
Gary K4FMX

On Fri, 12 Apr 2002 13:21:20 -0400, "tongaloa" <tongaloa@alltel.net> wrote:

>From the Svetlana 4cx400 conversion notes, and
>some research into the 2500B specifications:
>
>2500B power transformer is good for 750 W CCS. With 2 x 4cx400
>the 840 W reported is single tone PEP translates to 595 W RMS
>In consideration of the typical 50% over CCS that one can usually get out of
>a transformer in ICAS (1120 W) this translates to about 52% efficiency, and
>agrees with most CW specs for ham amps.
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>The GI7B conversion is reported to yield 1200 W out (two tone)
>or 600 W RMS. Same power!
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>I bet the 2 KW output reported, corresponds to voice peaks and
>not the single tone it is compared to. Voice has a higher peak to average
>ratio than two tone so 2 KW peak seems pretty reasonable.
>
>-bob
>WB4MNF
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>"Gary - KJ6Q" <davison7@gte.net> wrote in message
>news:0Mjt8.745$I64.564@nwrddc02.gnilink.net...
>> SAVE your TIME, MONEY, and EFFORT!
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>> That article, like every OTHER one I've read on the subject, involves LOTS
>of effort, money and
>> contortion - and leaves you with an amp that is a butchered monstrosity
>that will deliver about the
>> same output as a stock Heathkit SB-200 or Yaesu 2100B that can usually be
>bought for LESS than the
>> cost to modify the Dentron 2500...
>>
>> According to the pointed to article, the BEST observed OUTPUT power AFTER
>modification, was 840
>> watts - MY Dentron 2500B will put out 2KW into my dummy load any time, any
>day! The swapping of tube
>> types proposed by such articles are HARDLY to be considered a valid
>"improvement", OR a reasonable
>> method to ressurrect a 2500B...
>>
>> I *am* surprised that some enterprising soul hasn't tried swapping in the
>more easily obtained
>> 572B's - they operate at the same voltages, current and drive levels as
>the 8875's, use the same
>> type and placement of cooling, and it LOOKS as though they would fit in
>the provided space. If and
>> when MY 8875's fail, I'd be inclined to try the 572B's - but NEVER tubes
>like that article
>> suggests...
>>
>> --
>> Gary - KJ6Q
>> **********
>> Two things we'll never see:
>> 1. Perpetual motion...
>> 2. A liberal Democrat complaining
>> about "Too much government"
>>
>> "NI4L" <ni4l@charter.net> wrote in message
>news:3CB5BF91.D4917111@charter.net...

>> > New Life for Dentron MLA2500s
>> > (QST May 96 pg.45-48)
>> > MLA2500b.zip MLA 2500A/4CX800A Conversion package including
>> > builders' details, ARRL Lab test data for all nine HF bands and
>> > several
>> > photos of the author's modified amplifier. This is a "zipped" file
>> > 898K in size.
>> > (Does not include actual article)
>> > http://www.svetlana.com/docs/TechBulletins/TB.html
>> > i need some help i tried to download this but it will not work can
>> > someone else try or do you have it on file somewhere and could you email
>> > it to me?
>> > thanks chris NI4L
>> >
>> > --
>
>

2855. Re: noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 19:27:42 UTC
From: AB brown <abbrown@nospammail.com>
Message-ID: <a97cdv$lm2$1@slb4.atl.mindspring.net>
Source record: 44797
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

> True for Kenwood too. I have an old Uniden 10 meter rig which has the
> finest noise blanker I've ever seen for ignition noise. I've compared
> it against a half dozen Icom and Kenwood rigs and it beats them all by
> far.

Exactly my point, Bill. I can't figure out why the regular HF manufacturers like Icom and Yaesu don't design adequate noise blankers. This 718 for example was over $500 while the HTX was obtained used for under $100. The HTX has a far superior blanker. I've tried AF DSP, but the blanker is still better. IF DSP I think would be a different story though, but I think excessive cost would be an issue.

I'm now checking out a synchronous noise blanker design on the web. Looks promising, but according to the info. I've read, works best only on the lower bands, especially at 160 meters and lower. I'm also checking into a phaser that samples noise and deletes it by inverting and cancelling. Both of these designs attack the noise before it enters the rig and, at least to me, show promise.

AB

> Designing noise blankers must be part science, part art and part magic.
>
> Bill, W7TI

2856. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 19:46:12 UTC
From: Peter Voelpel <peter.voelpel@t-online.de>
Message-ID: <a97dkp$2ou$07$1@news.t-online.com>
Source record: 44798
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Gary - KJ6Q schrieb in Nachricht <5ZEt8.62$93.19@nwrddc04.gnilink.net>...

>I suspect 2 major issues create lower than hoped for output in the
conversions under discussion -

Make shure you use the same instrument to measure the power... into the same
dummy load...

>first is the class of operation they appear to be operating in - which
seems to be AB1/AB2 - both
>down in efficiency compared to the more common class B operation for linear
amplifier operation...

The MLA2500 is operating AB2 !! that is the common class of operating zero
bias tubes !!

>SECOND, is the likelihood that the final tank circuit needs significant
tweaking to comphensate for
>the different plate impedance of the substituted finals.

On same platevoltage and platecurrent there is no difference in impedance at
all !!

>
>2 OTHER inherant, potential issue with those conversions, is the
unsatisfactory adaption of cooling
>system from the 8875's to the vastly differing system needed for tubes like
the 400's and 800's -

provided adequate cooling, there is no reason for lower output, of course
the 4CXs need some pressure..

>it... At the very LEAST, a power deviding T pad SHOULD be used in these
cases, rather than merely
>relying upon turning down driver output as the only solution.

best is to let the driver work into a dummy load at the grid through an
attenuator

>> > AFTER switching to the 400's - how much power can YOU get outta YOUR
stock 2500B?

2 KW out means > 3KW in -----> plate dissipation > 1 KW, the 8875 is
limited to 300W by Eimac..
I suspect that also other parameters are exceeded:
max Plate Voltage is 2200V, maximum plate current 0,35 A , data for one tube

or, which is more likely, the measurement is wrong !!

>> > *I* can get 2 kw outta MINE - so I agree, something IS seriously WRONG with those 2500B

would be interested to see it running in a rtty-contest with 2kw out :-)

>> > conversions - so why MAKE the conversion for so POOR a return in efficiency - as clearly
>indicated
>> > right in the conversion articles themselves?

There will be nothing wrong with the conversion, the 8875 has the lower plate dissipation,
so with the higher dissipation of the 400s there is some safety margin.

You cannot expect to get more output then the amplifier was designed for.
The plate transformer and the plate output components are designed for probably not more then 1KW keydown output

Repaired already a couple of MLA2500s from contesters, who fried bandswitches and coils..

(output measures with bird equipment at 220 Volt never more then 1300 Watts)

73

Peter, DF3KV

2857. Is this a "for sale" newsgroup?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 20:34:23 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CB744CF.54B88536@eznec.com>
Source record: 44799

I notice a large and rapidly increasing number of postings which are offers to sell or buy one item or another, or to advertise an ebay auction item.

Aren't there newsgroups that are more appropriate for this, like rec.radio.amateur.equipment and .swap, or rec.radio.swap? If not, we should start a newsgroup for the purpose. I find it annoying to have to fish through the ads to find the postings about homebrewing, but maybe I'm a voice in the wilderness. I'd sure like to see the trend reversed before the ads completely dominate the group.

Roy Lewallen, W7EL

2858. Re: help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 20:47:18 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CB747D6.1E05F0EE@eznec.com>
Source record: 44800

Amidon's FT series parts are ferrite, and are mostly equivalent to Fair-Rite or Magnetics products with the same part number. T series parts are powdered iron, and correspond to MicroMetals product designations. To substitute a ferrite, look at the initial permeability, and find a core with about the same value. Then, if necessary, you can stack cores to get about the same impedance per turn squared. Within reason, you can also alter the number of turns to get the same impedance. You shouldn't use a core with a very different initial permeability unless you understand the tradeoffs involved.

You should never substitute a powdered iron core for a ferrite core, again unless you have a very good understanding of the differences. And even then, a reasonable substitution is usually impossible. Low frequency powdered iron cores are used for high flux density low frequency applications like transformers for switching supplies. High frequency powdered irons are used for inductors in tuned circuits, where Q, temperature coefficient, and high flux level capability are often important. So making a good substitution is tricky. I'd recommend trying a candidate core, then measuring the inductance and Q to see if it's adequate for the application. Ferrite, not powdered iron, is used for broadband RF transformers like the ones in HF power amplifiers.

Roy Lewallen, W7EL

Xu wrote:
>
> Hi!
> I'm planing to home made a
> RF power amplifier.But in
> our country I can not get Amidon's products(FT series), I can
> get the torid core, some of them ,can work in 0.5-30MHz,
> but"Mi"is too low,only have50-100,not as FT series of Amidon.
> my question is:
> How can I
> I use them in HF power amplifier as transformer and
> LBF inductor replace FT and T series?
> I think I can not use the brass tubes in the transformer
> of HF power amplifier because of it
> has verylow Mi.
> Thanks in advance
> 73! Xu

2859. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 21:01:10 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <a97humart0@208.206.142.107>
Source record: 44801
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

tongaloa wrote:
>
> From the Svetlana 4cx400 conversion notes, and
> some research into the 2500B specifications:
>
> 2500B power transformer is good for 750 W CCS. With 2 x 4cx400
> the 840 W reported is single tone PEP translates to 595 W RMS
> In consideration of the typical 50% over CCS that one can usually get out of
> a transformer in ICAS (1120 W) this translates to about 52% efficiency, and
> agrees with most CW specs for ham amps.
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> The GI7B conversion is reported to yield 1200 W out (two tone)
> or 600 W RMS. Same power!
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> I bet the 2 KW output reported, corresponds to voice peaks and
> not the single tone it is compared to. Voice has a higher peak to average
> ratio than two tone so 2 KW peak seems pretty reasonable.
>
>

I expect you're right. My straight MLA2500 will do 1425 watts keydown
carrier into a dummy load operating on 240VAC. No way it'll do 2KW. But
I didn't check it at PEP.

Dick

2860. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 21:13:12 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <a97il8ccd0@208.206.142.107>
Source record: 44802
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Agreed. The only ham amp I ever owned that had a PS that *wouldn't* sag
a good bit under full carrier load was the 4-1000A I built myself using
a plate transformer from a Gates AM broadcast transmitter. Most will
drop a few hundred watts, which will be preserved pretty well on SSB
peaks on normal voice.

Dick W0EX

Gary Schafer wrote:
>
> I see a little confusion on PEP and average power. If you put in full
> carrier (or single tone) and
> get 1000 watts output that is 1000 watts average power. Same power on
> cw. It is also 1000
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> Be careful of watt meter readings when comparing amps. All watt meters
> are not created equal.
> I see some claims of 800 watts out of an SB200. If it would in fact
> put out that much I would
> think the 3rd order products would be pretty bad. You would have to
> overdrive it to get that
> much power out.
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> 73
> Gary K4FMX
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2861. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 21:26:22 UTC
From: ".Bill M." <TheRealExray@netscape.net>
Message-ID: <3CB750FE.9965E065@netscape.net>
Source record: 44803
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Dick Carroll wrote:

>
> I expect you're right. My straight MLA2500 will do 1425 watts keydown
> carrier into a dummy load operating on 240VAC. No way it'll do 2KW. But
> I didn't check it at PEP.
>
> Dick

I've never owned the Dentron but I know two fellas who got them when
they first came out. They both easily did 2200 watts out keydown into a
dummy load, measured with a Bird wattmeter, one was using 110 vac. I
guess its only fair to mention that neither lasted very long :-)
-Bill WX4A

2862. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 21:38:47 UTC
From: Gary - KJ6Q <davison7@gte.net>
Message-ID: <HtIt8.4216$8W5.1921@nwrddc02.gnilink.net>
Source record: 44804
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Of course, we're talking here about what they are CAPABLE of in extreme go-for-broke output - NOT
what we recommend for normal, fulltime operation - but SOME like to fall back on extreme scenarios
as ridicule fodder, rather than recognize the INTENT of the measurement... NO, I not talking about
YOU or Dick...

--
Gary - KJ6Q
****
Two things we'll never see:
1. Perpetual motion...
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about "Too much government"

".Bill M." <TheRealExray@netscape.net> wrote in message
news:3CB750FE.9965E065@netscape.net...
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2863. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 21:47:56 UTC
From: Gary - KJ6Q <davison7@gte.net>
Message-ID: <gCIt8.4222$8W5.1680@nwrddc02.gnilink.net>
Source record: 44805
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Along these lines, my response to another behind-the scenes Email, refering to test procedures *I*
mormally use...

"READ my lips - as stated in my last message to you I test with maximum key-down CARRIER in CW mode
on the exciter - SSB mode on the 2500B - when tuned for MAXIMUM carrier output from the amp, I get
the stated power levels. I *also* see the SAME or slightly BETTER output on voice peaks when
switched to SSB... On the SB-200 and FT-2100B, usually approached 1 KW peak outputs on SSB into a
peak-reading power meter - and while some might NEXT attack the accuracy of my meter, it HAS been
checked against other quality meters, and is HARDLY off by the 50-60% it would have to be to match
critics claims... As far as my MLA-2500B is concerned, at maximum output, I can easily see 2KW voice
peaks on SSB..."

I might mention that the SAME wattmeter indicates 100-110 watts out from my TS-570, and 100 watts
out from my IC-746 and IC- 706IIG - It indicates 1600 watts out on my Amp Supply LK500NTX - all
under the SAME test procedures - so it hardly seems my meter should be TOO suspect to other that the
extremely desperate...

I repeat - I'm SURE the 400 and 800 tubes referred to are EXCXELLENT power producers in circuits
DESIGNED to optimize their performance - but I maintain that the MLA 2500 conversion articles under
discussion here are NOT obtaining that capability!

--
Gary - KJ6Q
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> >WB4MNF
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> >> Gary - KJ6Q
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> >> > New Life for Dentron MLA2500s
> >> > (QST May 96 pg.45-48)
> >> > MLA2500b.zip MLA 2500A/4CX800A Conversion package including
> >> > builders' details, ARRL Lab test data for all nine HF bands and

> >> > several
> >> > photos of the author's modified amplifier. This is a "zipped" file
> >> > 898K in size.
> >> > (Does not include actual article)
> >> > http://www.svetlana.com/docs/TechBulletins/TB.html
> >> > i need some help i tried to download this but it will not work can
> >> > someone else try or do you have it on file somewhere and could you email
> >> > it to me?
> >> > thanks chris NI4L
> >> >
> >> > --
> >
> >
>

2864. LOOKING FOR ORGINIAL BOX TS-440 KENWOOD

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 21:52:41 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3CB75729.C04B330C@charter.net>
Source record: 44806
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Anyone have a original box that the ts-440 came in that they would like
to sell.
needs to be in pretty good shape.
chris NI4L

--

NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

2865. Re: noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 22:07:13 UTC
From: Mike Yetsko <joe@user.com>
Message-ID: <ubemkjf1picu65@corp.supernews.com>
Source record: 44807
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

My K2 has a pretty effective noise blanker when I run it in the car. In
fact,
very effective.

Mike

"Bill Turner" <w7ti@dslextreme.com> wrote in message
news:stvdbu477t63r0s42h6h97hcsuaeljvknq@4ax.com...
> On Fri, 12 Apr 2002 06:57:10 -0700, "Ed Juge/NM" <ed_juge@zianet.com>
> wrote:
>
> >In reading a lot on the Icom reflector, I have found consistent comments
> >indicating the problem is Icom's engineers simply do NOT know how to
build a
> >really effective noise blanker!
> ____
>
> True for Kenwood too. I have an old Uniden 10 meter rig which has the
> finest noise blanker I've ever seen for ignition noise. I've compared
> it against a half dozen Icom and Kenwood rigs and it beats them all by
> far.
>
> Designing noise blankers must be part science, part art and part magic.
>
> Bill, W7TI

2866. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 22:11:01 UTC
From: Bill & Suzie Whatley <spud286@attbi.com>
Message-ID: <VXIt8.899$G72.773@sccrnsc01>
Source record: 44808

PWM is used because "high level" modulation can be achieved with far less modulator power than the old system of plate modulation. Technically, it is a series modulator (no transformer) which has much higher efficiency that the old class A modulators.

The filter is in the PWM modulator prior to coupling into the RF amp of the transmitter, not the receiver. The RF envelope looks just like regular AM at the output of the TX.

73
WA5VRL
Willis

2867. Re: PEV and PEP at 12 volts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 22:45:59 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <3CB763A7.D1BB3EE9@one.net>
Source record: 44809

The power out depends on the supply voltage and the load presented to
the amplifier. Power out is approximately:

P = V^2 / 2R

R is rarely made to be 50 Ohms. A transformer and/or other matching
circuitry will convert your "load" impedance into whatever you want the
amp to see. For transistor power amps, that's usually only a few Ohms.

So if you want 36 Watts out, you need R = V^2 / 2P = 144 / 72 = 2
Ohms, and you have to make a matching network that transforms 50 Ohms
<=> 2 Ohms.

... Rich

lightmetal wrote:
>
> I am building an amplifier strip to take 1mw up to about 1w. I am
> using 4 driver stages with an IRF510 final.
>
> I am seeing about 7.05 volts peak-to-peak into a 50ohm resistive load
> on the scope. Using the following formula, this would translate into
> about 125mw.
>
> PEP = (Peak-to-peak/2*.707)^2/50
>
> The IRF510 output circuit was borrowed from a CW amp. I rebiased the
> amp to run Class A.
>
> Given the 12 volt supply, I won't ever see more than 12 volts peak to
> peak out of this amp, correct? That would translate into 360mw.
>
> So how do people get more than 360mw out of a 12v supply without
> voltage doubles, etc.? I've seen a number of circuits that suggest
> this.
>
> Am I missing something?

2868. Re: Is this a "for sale" newsgroup?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 22:48:11 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <3CB7642B.1A91925C@one.net>
Source record: 44810

Amen.

... Rich

Roy Lewallen wrote:
>
> I notice a large and rapidly increasing number of postings which are
> offers to sell or buy one item or another, or to advertise an ebay
> auction item.
>
> Aren't there newsgroups that are more appropriate for this, like
> rec.radio.amateur.equipment and .swap, or rec.radio.swap? If not, we
> should start a newsgroup for the purpose. I find it annoying to have to
> fish through the ads to find the postings about homebrewing, but maybe
> I'm a voice in the wilderness. I'd sure like to see the trend reversed
> before the ads completely dominate the group.
>
> Roy Lewallen, W7EL

2869. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 23:05:38 UTC
From: tongaloa <tongaloa@alltel.net>
Message-ID: <a97p8n$l5b$1@iac5.navix.net>
Source record: 44811
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Back to the conversion!!!

2 x GI7BT triodes, not expensive or complicated.
Tubes are $25/each, delivered, NOS ex Soviet military.
I machined some mounts and will sell for $32/each to anyone who
doesn't want to make their own. So there is $50 to $114 in parts.
Additional parts. Filament transformer (GI6B/7B/7BT is 12V)
2 x silicone rubber chimneys, a biscuit(tm) blower from Allied,
fits where the old blower went, about 2 sq. feet of 0.032 6061T6
Aluminum and some screws and pop rivets.

The clean, full output, SB200 will fetch $350+ on ebay.
Just what I'll have in the MLA2500B when the conversion is done.
3db and 160m on an even $ swap!

Here is the tube:
http://www.nd2x.net/gi7b.html

73,

Bob
wb4mnf

2870. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 23:42:04 UTC
From: Gary - KJ6Q <davison7@gte.net>
Message-ID: <ghKt8.201$93.85@nwrddc04.gnilink.net>
Source record: 44812
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

HMMmmm - the pointer you provide seems primarily aimed at UHF operation of the tube, and in severely
pulsed operation - the plate dissipation looks good, as does the price and general design of the
tube in comparison to the 8875's. Sure would like to see a HF power chart, and the claimed 650 hours
tube life seems short, but that is probably at full frequency and power levels - dunno how that
would compare at HF with the 8875's - disregard my Email question concerning the Russian tubes -
this post has answered my questions..

Thanks.

--
Gary - KJ6Q
****
Two things we'll never see:
1. Perpetual motion...
2. A liberal Democrat complaining
about "Too much government"

"tongaloa" <tongaloa@alltel.net> wrote in message news:a97p8n$l5b$1@iac5.navix.net...
> Back to the conversion!!!
>
> 2 x GI7BT triodes, not expensive or complicated.
> Tubes are $25/each, delivered, NOS ex Soviet military.
> I machined some mounts and will sell for $32/each to anyone who
> doesn't want to make their own. So there is $50 to $114 in parts.
> Additional parts. Filament transformer (GI6B/7B/7BT is 12V)
> 2 x silicone rubber chimneys, a biscuit(tm) blower from Allied,
> fits where the old blower went, about 2 sq. feet of 0.032 6061T6
> Aluminum and some screws and pop rivets.
>
> The clean, full output, SB200 will fetch $350+ on ebay.
> Just what I'll have in the MLA2500B when the conversion is done.
> 3db and 160m on an even $ swap!
>
> Here is the tube:
> http://www.nd2x.net/gi7b.html
>
> 73,
>
> Bob

> wb4mnf
>

2871. Re: Is this a "for sale" newsgroup?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-12 23:57:02 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CB77462.24E5@pop.removethistomailme.net>
Source record: 44813

Roy Lewallen wrote:
>
> I notice a large and rapidly increasing number of postings which are
> offers to sell or buy one item or another, or to advertise an ebay
> auction item.
>
> Aren't there newsgroups that are more appropriate for this, like
> rec.radio.amateur.equipment and .swap, or rec.radio.swap? If not, we
> should start a newsgroup for the purpose. I find it annoying to have to
> fish through the ads to find the postings about homebrewing, but maybe
> I'm a voice in the wilderness. I'd sure like to see the trend reversed
> before the ads completely dominate the group.
>
> Roy Lewallen, W7EL

As long as the ads at least have something to do with homebrewing,
and/or come from people who otherwise contribute to the group, I'm fine
with them. I've bought stuff from people via the r.r.a.h. newsgroup,
and will continue to do so. Unfortunately a lot of the ads don't meet
either of the above criteria, and there's only so much that can be done
to stop them.

What needs to be avoided at ALL costs is the type of Vietnamesque
flamewar that has consumed groups like rec.antiques.radio+phono, where
the number of posts debating the type and quantity of acceptable ads
exceeds the actual number of said ads by at least two orders of
magnitude.

I tend to post a brief link on here when I'm selling a piece of test
equipment on the 'Bay, and haven't really had any complaints. In some
cases, like the functional but somewhat-less-than-cherry Tek spectrum
analyzer I'm about to list, there are some real homebrew-related
bargains to be had.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2872. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 00:05:06 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <a97sni$6fg$0@208.206.142.69>
Source record: 44814
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

".Bill M." wrote:
>
> Dick Carroll wrote:
>
> >
> > I expect you're right. My straight MLA2500 will do 1425 watts keydown
> > carrier into a dummy load operating on 240VAC. No way it'll do 2KW. But
> > I didn't check it at PEP.
> >
> > Dick
>
> I've never owned the Dentron but I know two fellas who got them when
> they first came out. They both easily did 2200 watts out keydown into a
> dummy load, measured with a Bird wattmeter, one was using 110 vac. I
> guess its only fair to mention that neither lasted very long :-)
>

I imagine they spread some fairly trashy signals, too. Once the amp is
driven past the linear portion of the grid curve average output may go
up some but it sure ain't linear any longer!
Another aside- I always consider the difference between average power
and PEP on most ham amps to be the difference in power supply droop at
keydown vs voice signal input which is often a few hundred to several
hundred volts. The droop usually doesn't show up with voice signal
input. If no droop, no difference.

Dick

2873. Re: PEV and PEP at 12 volts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 00:15:58 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3CB778BC.FC98BDDC@att.net>
Source record: 44815

Probably a slip of the key, but the formula you used gives average power
not peak envelope power.

Taking the p-p value and dividing by two gives the peak value. Multiplying
that by 0.707 (assuming that it is a sinewave and not some complex
waveshape) fives the rms amplitude of the wave. Squaring that and dividing
by the value of load resistance across which the voltage was measured gives
the average or root-mean-square power.

Apart from that, though, the real answer to your dilemma lies in impedance
matching, specificially with step-up transformers that can increase the
peak-to-peak voltage at the output load.

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!
QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

All outgoing email virus-checked by Norton Anti-Virus 2002

lightmetal wrote:
>
> I am building an amplifier strip to take 1mw up to about 1w. I am
> using 4 driver stages with an IRF510 final.
>
> I am seeing about 7.05 volts peak-to-peak into a 50ohm resistive load
> on the scope. Using the following formula, this would translate into
> about 125mw.
>
> PEP = (Peak-to-peak/2*.707)^2/50
>
> The IRF510 output circuit was borrowed from a CW amp. I rebiased the
> amp to run Class A.
>
> Given the 12 volt supply, I won't ever see more than 12 volts peak to
> peak out of this amp, correct? That would translate into 360mw.
>
> So how do people get more than 360mw out of a 12v supply without
> voltage doubles, etc.? I've seen a number of circuits that suggest
> this.
>
> Am I missing something?

2874. Re: noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 00:34:33 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3CB77D17.BB998F53@att.net>
Source record: 44816
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Ed, while I cannot agree so strongly with your conclusion, I will admit that my 765 and PRO leave a bit to be desired in the NB department. As far as Icom is concerned, the best noise limiter or blanker I have ever had on a receiver - since 1945! - is the one on the little IC-730 that I use for mobile service. It can totally remove ignition noise that is S7 or more on the meter. Couldn't belive it, first time I tried it. So, it is not a generic Icom failing.

I think that what is happening with the NB situation is that the operation and eventual effectiveness of the blanker has to be balanced off against other performance properties of the radio. I think that we can all agree that Icom engineers are just as competent as any others at designing HF amateur radios, so they are doing what they do for sound reasons, just not very obvious reasons. I suspect that they can design a NB that will handle anything you can throw at it with almost perfect operation. But, what has to "give" elsewhere in order to allow that degree of performance?

Engineering such complex products as our modern transceivers is never black and white - I suspect that even most shades of grey have been worn out by now! <:}

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!
QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

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Ed Juge/NM wrote:
>
> In reading a lot on the Icom reflector, I have found consistent comments
> indicating the problem is Icom's engineers simply do NOT know how to build a
> really effective noise blanker! I currently own a 756PRO and it can't hold
> a candle to the blankers in other radios I've owned including a Kenwood 940,
> Ten Tec Titan and Yaesu FT-1000D. It's probably the worst HF NB I've used.
> I have not used the Icom 718 but doubt there is any reason to believe it
> would be the one exception in their line.
>
> I have seen some incredibly good blankers in RS products.

2875. Re: noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 01:00:08 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <a980id$7pa$1@slb5.atl.mindspring.net>
Source record: 44817
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

One nasty problem in noise blanker design is the need to have a chunk of circuitry before the narrow crystal filter. This circuit has to delay the noise pulse on the signal path long enough for the noise detector to trigger and shut the signal path down. A few hundred picoseconds would be nice... Maybe even longer to get a really good performing noise blanker. A microsecond or so time delay would help a LOT.

==========

In order to get good strong signal handling most modern designs place the narrow filter as close to the front end of the radio as it can get... Often right after the mixer. This provides better strong signalling performance.

On the other hand, the crystal filter tends to 'ring' on the high energy noise pulse. Also, the phase shifts and group delay on the sides of the crystal filter tend to broaden out the noise pulse, frequently making it very difficult to have a noise blanker work on this broad and long pulse.

So, as a few people have suggested, it is all a matter of compromises in design. The trend has been to make better dynamic range radios and the engineering required to do that makes it difficult to add a really good noise blanker.

Many of the CB rigs had quite a bit of circuitry in them which slowed the main signal path down... They also usually have relatively lousy strong signal handling ability. These CB rigs were optimized for use in cars and such, focussing on low cost.

They also tried to make them handle ignition noise blankers and in the tradeoff they overload much more easily in a strong signal environment.

==========

I am not saying it can't be done, but rather that making a radio with good dynamic range AND a good noise blanker are almost contradictions. The designer can do one or the other. Both at the same time takes CAREFUL engineering and adds quite a bit of cost.

Jim Pennell
N6BIU

2876. Manual Sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 01:50:07 UTC
From: joeee1621@aol.com
Message-ID: <20020412215007.02606.00004756@mb-dh.aol.com>
Source record: 44818

Need a manual? We probably have it. Contact us for a list-over 680 listings at present-. We probably have a copy of what you need. All manuals $16 shipped unless otherwise noted.

2877. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 01:55:44 UTC
From: gaschafer@attbi.com
Message-ID: <3cb78e84.38060749@netnews.attbi.com>
Source record: 44824
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

On Fri, 12 Apr 2002 21:47:56 GMT, "Gary - KJ6Q" <davison7@gte.net>
wrote:

. On the SB-200 and FT-2100B, usually approached 1 KW peak outputs on
SSB into a
>peak-reading power meter -

That wouldn't happen to be a swan watt meter that you use ?

73
Gary K4FMX

2878. Re: noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 02:01:41 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CB79185.F327DAE8@eznec.com>
Source record: 44819
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I have an Icom 730 that I used a few times in a VW squareback, which had terrible ignition noise that even the 730 couldn't tame. I built up a little circuit that fired a one-shot from the ignition coil primary, like a tach does, and fed that into the noise blanker circuit of the 730. Did wonders.

[Side note: I gave my "Antenna Basics" talk at Arkiecon last week. At one point, I ask the audience to vote for how many dB they think there are in an "S-Unit". The first choice was "less than 2". A hand went up in the back. Then 2. Same hand. 3. Same one, at every choice, all the way up. . Hm. . . somebody in the audience Has A Clue. Turned out to be George, who introduced himself after the talk. I enjoyed meeting you, George!]

Roy Lewallen, W7EL

"George, W5YR" wrote:
>
> Ed, while I cannot agree so strongly with your conclusion, I will admit
> that my 765 and PRO leave a bit to be desired in the NB department. As far
> as Icom is concerned, the best noise limiter or blanker I have ever had on
> a receiver - since 1945! - is the one on the little IC-730 that I use for
> mobile service. It can totally remove ignition noise that is S7 or more on
> the meter. Couldn't belive it, first time I tried it. So, it is not a
> generic Icom failing.
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> I think that what is happening with the NB situation is that the operation
> and eventual effectiveness of the blanker has to be balanced off against
> other performance properties of the radio. I think that we can all agree
> that Icom engineers are just as competent as any others at designing HF
> amateur radios, so they are doing what they do for sound reasons, just not
> very obvious reasons. I suspect that they can design a NB that will handle
> anything you can throw at it with almost perfect operation. But, what has
> to "give" elsewhere in order to allow that degree of performance?
>
> Engineering such complex products as our modern transceivers is never black
> and white - I suspect that even most shades of grey have been worn out by
> now! <:}
>
> 73/72/oo, George W5YR - the Yellow Rose of Texas
> Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
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> QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
> Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

2879. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 02:02:42 UTC
From: Gary - KJ6Q <davison7@gte.net>
Message-ID: <6lMt8.4347$8W5.1393@nwrddc02.gnilink.net>
Source record: 44820
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

"Dick Carroll" <dixie@townsqr.com> wrote in message news:a97sni$6fg$0@208.206.142.69...
>
> > >
> > >> I imagine they spread some fairly trashy signals, too. Once the amp is
> driven past the linear portion of the grid curve average output may go
> up some but it sure ain't linear any longer!
>
> Dick

Probably true to a degree - but all things being equal which would YOU *honestly* choose - an amp
easily showing 2 KW OUT, key down, or one showing only 1200 watts out, under the same test conditions... No fancy footwork now, just a quick honest answer! <grin>

After all, MOST amps that will put out 2 KW at full grunt, will likely put out 1.5 KW pretty easily
and cleanly, all day long...

--
Gary - KJ6Q
****
Two things we'll never see:
1. Perpetual motion...
2. A liberal Democrat complaining
about "Too much government"

2880. Re: noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 02:15:36 UTC
From: Mike Yetsko <joe@user.com>
Message-ID: <ubf57mk909qcca@corp.supernews.com>
Source record: 44825
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hey Ed!!

I run my K2 in my old Jeep now and then. And my Jeep needs a
radio license! It even tears up 2M FM. But the one mode on the
K2 NB takes it ALL out. I mean ALL! I've never heard something
work so well.

Next best the Uniden uPD858 chassis SSB set as used in the
TRC-449. That seemed to be REALLY effective. The 424 was
ok for an AM rig, but not like the 449 (and the other two variants,
the 457 and 458, which were pretty much the same rig, only the 457
and 458 had an extra can and filter in the IF.)

Mike

"Ed Juge/NM" <ed_juge@zianet.com> wrote in message
news:3cb79266.0@oracle.zianet.com...
> Hi, Mike! Good to see you.
>
> I haven't tried my K2 in the car, but I have the blanker and it seems to
> work fine.
>
> Ed, W5EJ
>
>
> "Mike Yetsko" <joe@user.com> wrote in message
> news:ubemkjf1picu65@corp.supernews.com...
> > My K2 has a pretty effective noise blanker when I run it in the car. In
> > fact,
> > very effective.
> >
> > Mike
> >
> > "Bill Turner" <w7ti@dslextreme.com> wrote in message
> > news:stvdbu477t63r0s42h6h97hcsuaeljvknq@4ax.com...
> > > On Fri, 12 Apr 2002 06:57:10 -0700, "Ed Juge/NM" <ed_juge@zianet.com>
> > > wrote:
> > >
> > > >In reading a lot on the Icom reflector, I have found consistent
> comments
> > > >indicating the problem is Icom's engineers simply do NOT know how to
> > build a
> > > >really effective noise blanker!
> > > ____

> > >
> > > True for Kenwood too. I have an old Uniden 10 meter rig which has the
> > > finest noise blanker I've ever seen for ignition noise. I've compared
> > > it against a half dozen Icom and Kenwood rigs and it beats them all by
> > > far.
> > >
> > > Designing noise blankers must be part science, part art and part
magic.
> > >
> > > Bill, W7TI
> >
> >
>
>

2881. Re: Is this a "for sale" newsgroup?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 02:21:39 UTC
From: avatar <avatar@frii.com>
Message-ID: <3cb79634$0$64183$75868355@news.frii.net>
Source record: 44826

Roy, et al,

My understanding is that the original intent for the mentioned news groups is as follows: SWAP site is for buy/sell/wanted/trade and the other sites are for discussion/questions/replies.

While I don't care to sift through the FA ads as I can go there to look for an item if I wish, it is unlikely that they will go away.

Dave - W&#65533;MAY

Roy Lewallen <w7el@eznec.com> wrote in message news:3CB744CF.54B88536@eznec.com...
> I notice a large and rapidly increasing number of postings which are
> offers to sell or buy one item or another, or to advertise an ebay
> auction item.
>
> Aren't there newsgroups that are more appropriate for this, like
> rec.radio.amateur.equipment and .swap, or rec.radio.swap? If not, we
> should start a newsgroup for the purpose. I find it annoying to have to
> fish through the ads to find the postings about homebrewing, but maybe
> I'm a voice in the wilderness. I'd sure like to see the trend reversed
> before the ads completely dominate the group.
>
> Roy Lewallen, W7EL

2882. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 02:26:27 UTC
From: martin@okstate.edu
Message-ID: <a9850j$1qc$1@hydrogen.cis.okstate.edu>
Source record: 44827

The output of a PWM or Pulse Width Modulation transmitter
ends up being good old AM. Here is why.

The secret lies in the output filter. It has to be darn
good just like the output tank in a Class C amplifier. The idea
is that the tank rings like a bell at the carrier frequency. The
pulses are loaded with harmonics if not filtered, but the filter
gets rid of the harmonics and produces a sine wave carrier.

If the pulses are more off than on, there isn't much
energy being used to tickle the tank circuit and generate that
ringing carrier.

During maximum output, the pulses are more on than off
and lots of energy is being transfered which makes that tank sing
loudly so to speak.

The modulation signal such as your voice, causes the
pulses to get wider and narrower as the amplitude changes.

I have not got any math in front of me, but I bet the
most efficient pulse width is 50% on and off. This should
transfer the most energy to the tank circuit. Greater than 50%
duty cycles will start looking more like DC to the tank and the
carrier level should go down again.

Anyway, a PWM transmitter ends up producing the exact
same output as a conventional plate or screen modulation-type
transmitter, but very efficiently.
In article <ube17f3mmrj3e@corp.supernews.com>,
Jim Weir <jim@rst-engr.com> wrote:
>John --
>
>I'm not understanding. Suppose I have a transmitter that is putting out a
>true on-off pulse width modulated signal. You mention an "appropriate
>filter". Are you talking about this filter at the transmitter end or the
>receiver end? And if I do modulate a transmitter with PWM, what does a
>standard AM receiver using either envelope detection or some other scheme
>see? Is it transparent to the receiver the modulation technique or is it
>chopped at the other end?

It is transparent. You won't hear any difference at all
between a PWM-generated signal and an AM signal generated in any
of the other popular ways to do so.
--

Martin McCormick WB5AGZ Stillwater, OK
OSU Center for Computing and Information Services Network Operations Group

2883. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 02:34:59 UTC
From: Gary Glaenzer <nobulltrans@mchsi.com>
Message-ID: <nPMt8.5140$4D6.477@rwcrnsc52.ops.asp.att.net>
Source record: 44828

"Martin McCormick" <martin@okstate.edu> wrote in message
news:a9850j$1qc$1@hydrogen.cis.okstate.edu...

>
> Anyway, a PWM transmitter ends up producing the exact
> same output as a conventional plate or screen modulation-type
> transmitter, but very efficiently.

one other advantage is its ability to generate ANY base power level from
zero to full rated carrier power, with no problems switching high voltages
and currents, and adjusting audio input levels to achieve 100% modulation.

a 10 kW transmitter can be throttled back to 100 watts as easily as it can
to 5 kW

2884. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 02:35:09 UTC
From: Gary - KJ6Q <davison7@gte.net>
Message-ID: <xPMt8.4370$8W5.514@nwrddc02.gnilink.net>
Source record: 44829
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

No, it was not, and read my OTHER post concerning my prediction of critics falling back on ridiculing or questioning my power meter quality... Or MINE for that matter... Also read about OTHER
typical power readings from other pieces of gear, and past comparisons with other meters of respected quality before falling back on cheap shots as a desperate debate tool...

--
Gary - KJ6Q
****
Two things we'll never see:
1. Perpetual motion...
2. A liberal Democrat complaining
about "Too much government"
"Gary Schafer" <gaschafer@attbi.com> wrote in message
news:3cb78e84.38060749@netnews.attbi.com...
> On Fri, 12 Apr 2002 21:47:56 GMT, "Gary - KJ6Q" <davison7@gte.net>
> wrote:
>
> . On the SB-200 and FT-2100B, usually approached 1 KW peak outputs on
> SSB into a
> >peak-reading power meter -
>
>
> That wouldn't happen to be a swan watt meter that you use ?
>
> 73
> Gary K4FMX
>
>
>

2885. Re: PEV and PEP at 12 volts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 02:39:17 UTC
From: Bill Turner <w7ti@dslextreme.com>
Message-ID: <om5fbuc9vb2b0e2a2htjbjiou32i626530@4ax.com>
Source record: 44830

On Sat, 13 Apr 2002 00:15:58 GMT, "George, W5YR" <w5yr@att.net> wrote:

>Probably a slip of the key, but the formula you used gives average power
>not peak envelope power.
>
>Taking the p-p value and dividing by two gives the peak value. Multiplying
>that by 0.707 (assuming that it is a sinewave and not some complex
>waveshape) fives the rms amplitude of the wave. Squaring that and dividing
>by the value of load resistance across which the voltage was measured gives
>the average or root-mean-square power.
^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^

Perhaps another slip of the key, but average power and RMS power are two
different things. In the 1997 ARRL Handbook, chapter 6 has a good
discussion of the difference, including a graph. Other handbook years
will no doubt have the info somewhere.

Bill, W7TI

2886. Re: noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 02:55:39 UTC
From: Ed Juge/NM <ed_juge@zianet.com>
Message-ID: <3cb79265.0@oracle.zianet.com>
Source record: 44822
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

My last Kenwood was an old '940, probably 10+ years ago. I thought it had a pretty good NB. I owned an FT-1000D for eight years and it could take 20-over 9 atmospheric static down to S2. Also had a Ten Tec Titan that --once equipped with a redesigned NB-- was as good as any I've ever used.

I guess every model is different within each brand.

Ed, W5EJ

"AB brown" <abbrown@nospammail.com> wrote in message news:a97cdv$lm2$1@slb4.atl.mindspring.net...
> > True for Kenwood too. I have an old Uniden 10 meter rig which has the
> > finest noise blanker I've ever seen for ignition noise. I've compared
> > it against a half dozen Icom and Kenwood rigs and it beats them all by
> > far.
>
> Exactly my point, Bill. I can't figure out why the regular HF manufacturers
> like Icom and Yaesu don't design adequate noise blankers. This 718 for
> example was over $500 while the HTX was obtained used for under $100. The
> HTX has a far superior blanker. I've tried AF DSP, but the blanker is still
> better. IF DSP I think would be a different story though, but I think
> excessive cost would be an issue.
>
> I'm now checking out a synchronous noise blanker design on the web. Looks
> promising, but according to the info. I've read, works best only on the
> lower bands, especially at 160 meters and lower. I'm also checking into a
> phaser that samples noise and deletes it by inverting and cancelling. Both
> of these designs attack the noise before it enters the rig and, at least to
> me, show promise.
>
> AB
>
> > Designing noise blankers must be part science, part art and part magic.
> >
> > Bill, W7TI
>
>

2887. Re: noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 02:56:45 UTC
From: Ed Juge/NM <ed_juge@zianet.com>
Message-ID: <3cb79266.0@oracle.zianet.com>
Source record: 44821
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hi, Mike! Good to see you.

I haven't tried my K2 in the car, but I have the blanker and it seems to work fine.

Ed, W5EJ

"Mike Yetsko" <joe@user.com> wrote in message news:ubemkjf1picu65@corp.supernews.com...
> My K2 has a pretty effective noise blanker when I run it in the car. In
> fact,
> very effective.
>
> Mike
>
> "Bill Turner" <w7ti@dslextreme.com> wrote in message
> news:stvdbu477t63r0s42h6h97hcsuaeljvknq@4ax.com...
> > On Fri, 12 Apr 2002 06:57:10 -0700, "Ed Juge/NM" <ed_juge@zianet.com>
> > wrote:
> >
> > >In reading a lot on the Icom reflector, I have found consistent
> comments
> > >indicating the problem is Icom's engineers simply do NOT know how to
> build a
> > >really effective noise blanker!
> > ____
> >
> > True for Kenwood too. I have an old Uniden 10 meter rig which has the
> > finest noise blanker I've ever seen for ignition noise. I've compared
> > it against a half dozen Icom and Kenwood rigs and it beats them all by
> > far.
> >
> > Designing noise blankers must be part science, part art and part magic.
> >
> > Bill, W7TI
>
>

2888. Re: noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 03:00:58 UTC
From: Ed Juge/NM <ed_juge@zianet.com>
Message-ID: <3cb79267.0@oracle.zianet.com>
Source record: 44823
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Gary, A lot of folks don't give RS credit for some of the things they did extremely well. Maybe I'm partial to 'em since I worked in the main office until about 8 years ago.

If you want to hear a DSP filter that'll knock your socks off, listen to the ClearSpeech system... especially the new version that started shipping last August/September.

73.... Ed

"Gary V. Deutschmann, Sr." <raiar@slacc.com.nospam> wrote in message news:3cb727b3.104844815@news.galilei.com...
> Hi Ed
>
> I hate to admit it, but I have to agree with you as well.
> I have an HTX-100 and will use it rather than a Kenwood HF rig, unless
> the band really gets rough.
>
> I have inline with the HTX100 a very old HyGain Receiver Preamp from
> the hayday of the CB boom as well. I have found that by keeping the
> Receiver Gain on the HTX100 turned down to about 1/2 and using the
> external pre-amp I can pull in stations that fly right by the Kenwood.
> The HTX100 hears them without the pre-amp with the gain cranked up,
> but the pre-amp seems to keep the noise to a minimum and brings up
> only the signal itself, in most cases, needless to say, there are
> exceptions. I also have a DSP from RS, it's great on CW but almost
> useless on sideband.
>
> When I take the HTX100 on the road, the NB filters out every speck of
> ignition noise, including that from other vehicles and trucks around
> you.
>
> The only NB filter I have found that works better than the ones used
> in the RS ham gear, was the 'crystal lattice filter' that was found in
> many Lafayette R&E Chicken Band rigs.
>
> TTUL
> Gary
>

2889. Re: PEV and PEP at 12 volts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 05:03:58 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CB7BC3E.D118B174@eznec.com>
Source record: 44831

To my relief, I don't see any mention anywhere in chapter 6 of RMS power. Although an RMS value can be calculated for a power waveform, as it can for any periodic waveform, RMS power has little use. RMS voltage and current are very useful, since they lead to easy calculation of average power(*), which is of great use -- it's the amount of DC power that would cause the same amount of heating.

I'm aware that audio amplifier manufacturers often rate amplifiers as producing so much "RMS power", but as far as I know, that's a calculation of the RMS value of the envelope -- which isn't the RMS value of the power waveform -- and I'm not sure just how it's useful.

Roy Lewallen, W7EL

(*)Average power = Erms^2/R or Irms^2*R

Bill Turner wrote:
>
> On Sat, 13 Apr 2002 00:15:58 GMT, "George, W5YR" <w5yr@att.net> wrote:
>
> >Probably a slip of the key, but the formula you used gives average power
> >not peak envelope power.
> >
> >Taking the p-p value and dividing by two gives the peak value. Multiplying
> >that by 0.707 (assuming that it is a sinewave and not some complex
> >waveshape) fives the rms amplitude of the wave. Squaring that and dividing
> >by the value of load resistance across which the voltage was measured gives
> >the average or root-mean-square power.
> ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
> ____
>
> Perhaps another slip of the key, but average power and RMS power are two
> different things. In the 1997 ARRL Handbook, chapter 6 has a good
> discussion of the difference, including a graph. Other handbook years
> will no doubt have the info somewhere.
>
> Bill, W7TI

2890. Re: noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 05:08:07 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3CB7BD35.68619756@att.net>
Source record: 44832
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Thanks, Roy - the pleasure was mutual! And your presentation had a lot of "meat" in it despite being thought of as being at a pretty elementary level.

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!
QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

All outgoing email virus-checked by Norton Anti-Virus 2002

Roy Lewallen wrote:
>
> I have an Icom 730 that I used a few times in a VW squareback, which had
> terrible ignition noise that even the 730 couldn't tame. I built up a
> little circuit that fired a one-shot from the ignition coil primary,
> like a tach does, and fed that into the noise blanker circuit of the
> 730. Did wonders.
>
> [Side note: I gave my "Antenna Basics" talk at Arkiecon last week. At
> one point, I ask the audience to vote for how many dB they think there
> are in an "S-Unit". The first choice was "less than 2". A hand went up
> in the back. Then 2. Same hand. 3. Same one, at every choice, all the
> way up. . Hm. . . somebody in the audience Has A Clue. Turned out to be
> George, who introduced himself after the talk. I enjoyed meeting you,
> George!]

2891. Re: noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 05:17:43 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3CB7BF76.2FA9EDD9@att.net>
Source record: 44833
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Thanks, Roy - the pleasure was mutual! And your presentation had a lot of "meat" in it despite being thought of as being at a pretty elementary level.

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
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Roy Lewallen wrote:
>
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> [Side note: I gave my "Antenna Basics" talk at Arkiecon last week. At
> one point, I ask the audience to vote for how many dB they think there
> are in an "S-Unit". The first choice was "less than 2". A hand went up
> in the back. Then 2. Same hand. 3. Same one, at every choice, all the
> way up. . Hm. . . somebody in the audience Has A Clue. Turned out to be
> George, who introduced himself after the talk. I enjoyed meeting you,
> George!]

2892. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 05:41:53 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3cb7c382$0$16570@echo-01.iinet.net.au>
Source record: 44834

This scheme is used widely in broadcast AM transmitters as the power used in the modulator is much less than the traditional plate modulation scheme.
The supply to the power amplifier of the transmitter can be varied/switched (as in a conventional plate modulator).Instead of varying the supply voltage with a plate transformer it can be switched on and off at a subcarrier rate (say 50 KHz) using switch mode FETs
The duty cycle of the PWM is varied for modulation - 50% for carrier only
The same principle applies in switch mode power supplies and regulators (in fact I have often wondered whether it would be possible to use one of these chips in an AM system - has anyone done this?)
A filter is required to get rid of the subcarrier after the switch or it will appear as sidebands. The result is a varying DC voltage at the modulation rate.
I would be interested in such a system on 3.5 MHz
In fact you could use switch mode FETs for the RF amplifier also at this frequency at about $5 each for the legal limit (150W in Oz)

Richard

"r.crowley" <rcrowley7@xprt.net> wrote in message
news:ubb7alendr4m63@corp.supernews.com...
> Is this method used anywhere? With modern digital circuitry, it seems
> almost easier to do than traditional methods of amplitude modulation.
> (Assuming appropriate filtering to produce proper sine-wave output, not
> square wave!)
>
> Is there any AM activity on amateur bands anymore?
>
>

2893. Re: MP3 CW to Text converter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 06:03:31 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0204122203.359a4e9b@posting.google.com>
Source record: 44835

wa0goz@arrl.net wrote in message news:<3CB6FA01.16BC@arrl.net>...
> .Bill M. wrote:
>
> > Whew! Maybe the original poster should explain in more detail what it
> > is that he wants to do.
>
> I'll try. I have some MP3 CW recordings which are a mix of CW at
> different frequencies, that is, they change frequencies every so often.
> I would like to make them all the same frequency. A frequency of my
> choosing. I thought if I could get them back to text format, I could
> use a program I have for making them into new MP3 recordings and they
> would all be at the frequency I wanted.
>
> Hope this helps.
>
> Thanks and 73,
>
> Henry WA0GOZ

But then all you need is some sort of decoder, to take the audio tones
and convert them to keying of DC.

Basically, just a filter, and some sort of rectifier. You then use
the output of the rectifier to key some sort of oscillator running
at the frequency of your choice.

You can find plenty of examples of this sort of thing in the ham
magazines over the years. Unless it's all being done in software,
you're going to see the sort of circuitry in anything that decodes
CW to text. Certainly, you saw it a lot when small computers were
new, and everyone wanted to make morse decoders. You also see
this sort of thing as a sort of CW filter. The results seem
mixed, but the idea being that you can filter really heavily
because you won't be listening to the output, and the keyed oscillator
is only the code you want to hear, without the background noise,
fading, and nearby signals.

You don't need to convert to text, you just need the keyed DC
that you will in effect be regenerating by keying your own code
practice oscillator.

Michael VE2BVW

2894. Re: noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 11:39:51 UTC
From: la8ak.xnd@online.no
Message-ID: <3cb761fc.10440218@news.online.no>
Source record: 44836
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Fri, 12 Apr 2002 15:27:42 -0400, "AB brown"
<abbrown@nospammail.com> wrote:

>> True for Kenwood too. I have an old Uniden 10 meter rig which has the
>> finest noise blanker I've ever seen for ignition noise. I've compared
>> it against a half dozen Icom and Kenwood rigs and it beats them all by
>> far.
>
>Exactly my point, Bill. I can't figure out why the regular HF manufacturers
>like Icom and Yaesu don't design adequate noise blankers. This 718 for
>example was over $500 while the HTX was obtained used for under $100. The
>HTX has a far superior blanker. I've tried AF DSP, but the blanker is still
>better. IF DSP I think would be a different story though, but I think
>excessive cost would be an issue.
>
perhaps they didn't know how to build an impulse-noise-generator?
I made one and used it to improve some of my rigs, but I am not sure
it is has exactly the right sort of pulses.

On Ft-7/FT-7B you could easily improve the NB with larger time
constant at the NB output stage

73
LA8AK
--
remove ,xnd to reply

2895. Re: PEV and PEP at 12 volts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 11:56:54 UTC
From: Bill Turner <w7ti@dslextreme.com>
Message-ID: <5l6gbusm3m41032u7s9ks7sn81fcfrqpgf@4ax.com>
Source record: 44837

On Fri, 12 Apr 2002 22:03:58 -0700, Roy Lewallen <w7el@eznec.com> wrote:

>RMS voltage
>and current are very useful, since they lead to easy calculation of
>average power(*), which is of great use -- it's the amount of DC power
>that would cause the same amount of heating.

That definition - "the amount of DC power that would cause the same amount of heating" is what I was taught as the definition of RMS power, not average power.

Since RMS voltage and current are different from average voltage and current, it stands to reason that the power derived therefrom would be different too.

Isn't it true that:

Peak power = peak V * peak A
RMS power = RMS V * RMS A
Avg power = Avg V * Avg A

Again I refer to chapter 6 of the ARRL handbook for those unclear on the difference between RMS voltage/current and average voltage/current.

I suppose there is such a thing as "average RMS power", but that's something different still.

Bill, W7TI

2896. Curing static on panel meter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 12:22:32 UTC
From: k9sqg@aol.com
Message-ID: <20020413082232.06506.00003200@mb-mo.aol.com>
Source record: 44838

Have a plastic meter that was shipped to me. It was on zero when shipped but reads 1/3 scale after shipment due to static electricity from the plastic bag. Know of any remedies?

73s,

Evan

2897. Re: Curing static on panel meter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 12:58:54 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <ubgatq1o79nu3a@corp.supernews.com>
Source record: 44839

> Have a plastic meter that was shipped to me. It was on zero when
shipped but
> reads 1/3 scale after shipment due to static electricity from the
plastic bag.
> Know of any remedies?
>
I've had them do that while installed. Rubbing a slightly damp cloth
across the front of the meter usually cures it (at least for a while).

2898. Re: Curing static on panel meter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 13:05:48 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CB82D2C.CF9CD885@netscape.net>
Source record: 44840

"Bob Lewis (AA4PB)" wrote:
>
> > Have a plastic meter that was shipped to me. It was on zero when
> shipped but
> > reads 1/3 scale after shipment due to static electricity from the
> plastic bag.
> > Know of any remedies?
> >
> I've had them do that while installed. Rubbing a slightly damp cloth
> across the front of the meter usually cures it (at least for a while).

I've heard of wiping them with one of those anti-static clothes dryer
sheets. Never done it myself, but worth a try.
-Bill

2899. Re: Curing static on panel meter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 13:20:39 UTC
From: brokebob@aol.com
Message-ID: <20020413092039.27478.00002885@mb-mr.aol.com>
Source record: 44841

Just a drop of liquid detergent in the water used to wipe the meter will make the cure last much longer.
brokebob@aol.com (broke=not working, retired=not working, retired=broke)

2900. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 13:45:44 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <C81u8.4093$qa.200664@news8-gui.server.ntli.net>
Source record: 44755
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

"Gary - KJ6Q" <davison7@gte.net> wrote in message
news:xPMt8.4370$8W5.514@nwrddc02.gnilink.net...
> No, it was not, and read my OTHER post concerning my prediction of critics
falling back on
> ridiculing or questioning my power meter quality... Or MINE for that
matter... Also read about OTHER
> typical power readings from other pieces of gear, and past comparisons
with other meters of
> respected quality before falling back on cheap shots as a desperate debate
tool...
=======
As mentioned earlier in this tread ,perhaps the arguments about watt meter accuracy can be curbed by comparing the reading with that of a suitable (calibrated) oscilliscope using a known dummy load.

Frank gm0csz.kn6wh@ntlworld.com

2901. Re: MP3 CW to Text converter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 13:57:44 UTC
From: wa0goz@arrl.net
Message-ID: <3CB83958.4C3D@arrl.net>
Source record: 44842

Michael Black wrote:

> But then all you need is some sort of decoder, to take the audio tones
> and convert them to keying of DC.

> Unless it's all being done in software,
> you're going to see the sort of circuitry in anything that decodes
> CW to text.

Michael, that's what I want -- all in software. I don't want to take it off the computer, just convert the tones from one frequency to another.

Thanks and 73

Henry WA0GOZ

2902. Re: MP3 CW to Text converter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 14:14:11 UTC
From: Rory Davis <n7cr@nospambellsouth.net>
Message-ID: <wXWt8.71004$VM5.29309225@e3500-atl1.usenetserver.com>
Source record: 44843

> Michael, that's what I want -- all in software. I don't want to take it
> off the computer, just convert the tones from one frequency to another.
>
> Henry WA0GOZ

Simply convert the MP3 to a .wav file and use commonly-available audio manipulation software like Goldwave to shift the pitch of the tone. If the CW rate is not a comfortable speed you can also play with the sampling rate to slow it down or speed it up.

2903. Re: Curing static on panel meter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 15:15:33 UTC
From: Bill Turner <w7ti@dslextreme.com>
Message-ID: <1nigbu46cq03qaii1friqejvum3k23cilj@4ax.com>
Source record: 44844

On 13 Apr 2002 12:22:32 GMT, k9sqg@aol.com (K9SQG) wrote:

>Have a plastic meter that was shipped to me. It was on zero when shipped but
>reads 1/3 scale after shipment due to static electricity from the plastic bag.
>Know of any remedies?

I had that once on a VTVM meter and it about drove me nuts trying to get rid of it. Finally, in desperation, I sprayed the meter with Windex (without wiping) and as the Windex evaporated, it took the static charge with it. Strange but true.

Since then I've often wondered if plain water would have worked but haven't had the guts to try it. :-)

Bill, W7TI

2904. filter caps NEED HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 15:19:34 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3CB84C86.F79E7ABE@charter.net>
Source record: 44845

i have a clipperon L i'm reworking. it has the bill edwards tuned input board which because of the size and limited space on height and width is

giving me a problem.
if i use a can type a hair over 4" in height all i can put in and really no bigger round that 1 3/8" can you suggest something? 3 1/2" wide 6" length 4" high is my working space. would like to use 450 to 500

v at say 300 to 450mf caps need 8 total or a oil cap rated about 32 mf at 4 or 5 kv if i can find something to fit.
can anyone help?
thanks chris NI4L

--

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2905. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 16:17:16 UTC
From: gaschafer@attbi.com
Message-ID: <3cb85883.3111210@netnews.attbi.com>
Source record: 44846
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Much to your disappointment the question was not meant as a cheap shot at you or your
meters. By the tone of your post's it would seem that you wish to make your point more by
assertion than by fact and are quick to try and belittle others that may even question your
findings.

Rather than rant about how good the watt meters are that you are using maybe you would like
to share with us what you actually used to measure the power with?

Please keep in mind that most good watt meters can have at least a 10% error of full scale
reading. Using a watt meter with 2500 watts full scale at 1000 watts could be in error by 250
watts. Some meters are not that good.

Most SB200's that I have seen do not put more than 600 watts. Maybe mine and others watt
meters are in error.

73
Gary K4FMX

On Sat, 13 Apr 2002 02:35:09 GMT, "Gary - KJ6Q" <davison7@gte.net>
wrote:

>No, it was not, and read my OTHER post concerning my prediction of critics falling back on
>ridiculing or questioning my power meter quality... Or MINE for that matter... Also read about OTHER
>typical power readings from other pieces of gear, and past comparisons with other meters of
>respected quality before falling back on cheap shots as a desperate debate tool...
>
>--
>Gary - KJ6Q
>**********
>Two things we'll never see:
>1. Perpetual motion...
>2. A liberal Democrat complaining
>about "Too much government"
>"Gary Schafer" <gaschafer@attbi.com> wrote in message
news:3cb78e84.38060749@netnews.attbi.com...
>> On Fri, 12 Apr 2002 21:47:56 GMT, "Gary - KJ6Q" <davison7@gte.net>

>> wrote:
>>
>> . On the SB-200 and FT-2100B, usually approached 1 KW peak outputs on
>> SSB into a
>> >peak-reading power meter -
>>
>>
>> That wouldn't happen to be a swan watt meter that you use ?
>>
>> 73
>> Gary K4FMX
>>
>>
>>
>

2906. Castro used a BC348?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 16:43:28 UTC
From: "news.bellatlantic.net" <vze3kq35@verizon.net>
Message-ID: <QeZt8.6782$8W5.3196@nwrddc02.gnilink.net>
Source record: 44747

Sitting here recuperating from a broken ankle and watching history TV I interested to see that the receiver used by Castro during the early revolution was the unmistakable BC348! I couldn't make out the transmitter, however.

Jack

2907. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 16:51:08 UTC
From: Gary - KJ6Q <davison7@gte.net>
Message-ID: <0mZt8.6836$8W5.1334@nwrddc02.gnilink.net>
Source record: 44748
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

"Gary Schafer" <gaschafer@attbi.com> wrote in message
news:3cb85883.3111210@netnews.attbi.com...

> Much to your disappointment the question was not meant as a cheap shot
> at you or your
> meters.

SORRY Charlie - I know a cheap shot when one is fired my way - why not just be a man, and admit your
intent, instead of falling back into a tap-dancing routine as a coverup...

> Most SB200's that I have seen do not put more than 600 watts. Maybe
> mine and others watt
> meters are in error.

You know better than *I* do about the quality and accuracy of your own test equipment - so unlike
YOU, I won't profess to judge it unseen, and from a distance... Besides, why automatically assume my
meter - or those of others are reading HIGH? FACT is, the checks I have done with mine against
Waters and Bird wattmeters have indicated MINE read slightly LOW in the areas where there IS a
difference - but usually pretty much dead on on most ranges and readings...

And, I don't mind debate or criticism when it is applied in a constructive and courteous manner -
it's the mindless, juvenile taunts and childish insults that annoy me - sorta like YOURS...

AT this point, it's obvious that constructive communication between us is unlikely - sooooo...

Kerplunk!

MEANWHILE, feel completely free to continue to play to the crowd with witty response...

--
Gary - KJ6Q
****
Two things we'll never see:
1. Perpetual motion...
2. A liberal Democrat complaining
about "Too much government"

>
> 73

> Gary K4FMX
>
>
>
> On Sat, 13 Apr 2002 02:35:09 GMT, "Gary - KJ6Q" <davison7@gte.net>
> wrote:
>
> >No, it was not, and read my OTHER post concerning my prediction of critics falling back
on
> >ridiculing or questioning my power meter quality... Or MINE for that matter... Also read
about
OTHER
> >typical power readings from other pieces of gear, and past comparisons with other meters
of
> >respected quality before falling back on cheap shots as a desperate debate tool...
> >
> >--
> >Gary - KJ6Q
> >**********
> >Two things we'll never see:
> >1. Perpetual motion...
> >2. A liberal Democrat complaining
> >about "Too much government"
> >"Gary Schafer" <gaschafer@attbi.com> wrote in message
news:3cb78e84.38060749@netnews.attbi.com...
> >> On Fri, 12 Apr 2002 21:47:56 GMT, "Gary - KJ6Q" <davison7@gte.net>
> >> wrote:
> >>
> >> . On the SB-200 and FT-2100B, usually approached 1 KW peak outputs on
> >> SSB into a
> >> >peak-reading power meter -
> >>
> >>
> >> That wouldn't happen to be a swan watt meter that you use ?
> >>
> >> 73
> >> Gary K4FMX
> >>
> >>
> >>
> >>
> >
>

2908. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 17:38:14 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <ubgr80a1nfcr59@corp.supernews.com>
Source record: 44749

So what I'm hearing, check me if I'm wrong, is that the PWM scheme for AM is necessarily a very narrowband system. That is, if (for example) I wanted to have a PWM system that would cover the entire 2-meter band (all 3% bandwidth of it) then I'd have to retune the "very narrow output filter" every time I changed frequencies an appreciable amount. There would be no such thing as a filter at the output for the entire band, but a hi-Q filter that would need to be tweaked each significant change in frequency.

Now, anybody got a scheme for PWM where a broadband filter could be used and not tuned each time you QSY?

Jim

"Jim Weir" <jim@rst-engr.com> wrote in message
news:ube17f3mmrj3e@corp.supernews.com...
> John --
>
> I'm not understanding.

2909. Re: Castro used a BC348?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 18:29:04 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3cb878a2.391675@news.freeserve.net>
Source record: 44750

On Sat, 13 Apr 2002 16:43:28 GMT, "news.bellatlantic.net"
<vze3kq35@verizon.net> wrote:

>Sitting here recuperating from a broken ankle and watching history TV I
>interested to see that the receiver used by Castro during the early
>revolution was the unmistakable BC348! I couldn't make out the transmitter,
>however.
>
Did the CIA have an exploding valve for it? ;0)

2910. 6:1 balun

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 19:57:46 UTC
From: Jason <kc7eip_nospam@shaw.ca>
Message-ID: <_40u8.28503$ir6.1194609@news1.calgary.shaw.ca>
Source record: 44751

Trying to figure out a workable 6 to 1 balun for use with a pixieII and a resonant antenna cut for 3.6864 ..a 4 to 1 would get me down to 75 ohm but i do not have a tuner so the closer to 50 the better... any suggestions?

2911. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 20:05:51 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <ofU1rwAf+Iu8Ew8M@fslife.co.uk>
Source record: 44752

Jim,

>Now, anybody got a scheme for PWM where a broadband filter could be used and
>not tuned each time you QSY?

Check out Steve's site:

http://www.netway.com/~stevec/ham/

He is, Mr PWM both on tubes and transistors.

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

2912. Re: Castro used a BC348?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 20:08:12 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <Ou4snTBsAJu8Ewqe@fslife.co.uk>
Source record: 44753

Hey,

>Did the CIA have an exploding valve for it? ;0)

Don't knock the guy.

He's still in charge nearly fifty years on, has a world renowned medical system and makes fine cigars.

More than what can be said of Clinton:-)

--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

2913. Re: Castro used a BC348?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 20:34:49 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3cb89590.1237851@news.freeserve.net>
Source record: 44754

On Sat, 13 Apr 2002 21:08:12 +0100, Philip de Cadenet
<Philstheboss@thebbc.fslife.co.uk> wrote:

>Hey,
>
>>Did the CIA have an exploding valve for it? ;0)
>
>Don't knock the guy.
>
>He's still in charge nearly fifty years on, has a world renowned medical
>system and makes fine cigars.
>
>More than what can be said of Clinton:-)
>
Their cars are a joke and their 'planes fall out of the sky.. but I'd
love to visit Cuba, Sadly I don't think I'll ever get there.
atb Mike W
--

2914. Re: 6:1 balun

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 21:17:15 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CB8A05B.9939AE44@netscape.net>
Source record: 44756

Jason wrote:
>
> Trying to figure out a workable 6 to 1 balun for use with a pixieII and a
> resonant antenna cut for 3.6864 ..a 4 to 1 would get me down to 75 ohm but i
> do not have a tuner so the closer to 50 the better... any suggestions?

What kind of antenna is this? Folded dipole?
-Bill

2915. Re: Castro used a BC348?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 21:19:37 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CB8A0E9.7E0E9D80@netscape.net>
Source record: 44757

Philip de Cadenet wrote:
>
> Hey,
>
> >Did the CIA have an exploding valve for it? ;0)
>
> Don't knock the guy.
>
> He's still in charge nearly fifty years on, has a world renowned medical
> system and makes fine cigars.
>
> More than what can be said of Clinton:-)

Yeah, but only Clinton could combine those two aspects.
:-)

2916. Re: PEV and PEP at 12 volts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 21:22:57 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CB8A1B1.1F478764@eznec.com>
Source record: 44758

Bill Turner wrote:
>
> On Fri, 12 Apr 2002 22:03:58 -0700, Roy Lewallen <w7el@eznec.com> wrote:
>
> >RMS voltage
> >and current are very useful, since they lead to easy calculation of
> >average power(*), which is of great use -- it's the amount of DC power
> >that would cause the same amount of heating.
> ----------
>
> That definition - "the amount of DC power that would cause the same
> amount of heating" is what I was taught as the definition of RMS power,
> not average power.

No, that's a property of the average power.

> Since RMS voltage and current are different from average voltage and
> current, it stands to reason that the power derived therefrom would be
> different too.

The average power is, in general, different from RMS power. The average power, as I mentioned in my earlier posting, = Erms^2/R or Irms^2/R. This is the reason we even bother calculating the RMS value of voltage or current -- to make it easy to calculate average power.

> Isn't it true that:
>
> Peak power = peak V * peak A

Yes.

> RMS power = RMS V * RMS A

No. Average power = Vrms * Irms (times the cosine of the angle between V and I if the impedance is reactive).

> Avg power = Avg V * Avg A

No. See above.

> Again I refer to chapter 6 of the ARRL handbook for those unclear on the
> difference between RMS voltage/current and average voltage/current.

I also recommend this source. Notice that nowhere in the chapter does it mention RMS power. I don't believe you'll find RMS power calculated in any text on electricity. Not because it can't be done -- it's well defined and straightforward to calculate -- but it simply isn't useful.

> I suppose there is such a thing as "average RMS power", but that's
> something different still.

You could use this term if you want, but it would be the same as the RMS power. RMS power is a single number, and the average value of a single number is that number.

The average value of any periodic waveform x(t) = 1/T * the integral over a period of x dt.
The RMS value of any periodic waveform x(t) = sqrt(1/T * the integral over a period of x^2 dt)
where T is the period of the waveform
If you look in any text on electrical circuit theory, you'll find the derivation of the equation linking average power to RMS voltage and current.

Roy Lewallen, W7EL

2917. Re: 6:1 balun

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 21:39:18 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <9C1u8.4126$qa.203333@news8-gui.server.ntli.net>
Source record: 44759

"Jason" <kc7eip_nospam@shaw.ca> wrote in message
news:_40u8.28503$ir6.1194609@news1.calgary.shaw.ca...
> Trying to figure out a workable 6 to 1 balun for use with a pixieII and a
> resonant antenna cut for 3.6864 ..a 4 to 1 would get me down to 75 ohm but
i
> do not have a tuner so the closer to 50 the better... any suggestions?
=========
Don't think it will make a lot of difference using a 6:1 instead of a 4:1
balun for your application.
If you insist on a 6:1 balan , I can refer to 'Building and using Baluns and
Ununs' (practical designs for the experimenter) ,by Jerry Sevick , W2FMI ,
Chapter 5 .
Library of Congress catalog card number 94-69520, ISBN 0-943016-09-6
published by CQ Communicationa inc. Bought @ Ham Radio Outlet.

Frank gm0csz.kn6wh@ntlworld.com

2918. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 22:08:44 UTC
From: Peter Voelpel <peter.voelpel@t-online.de>
Message-ID: <a9aaad$m2j$07$1@news.t-online.com>
Source record: 44760
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Gary Schafer schrieb in Nachricht <3cb72ce7.13067995@netnews.attbi.com>...
>I see a little confusion on PEP and average power.

Hi Gary ,

Your explanation could not be done any better

Peter, DF3KV

2919. Re: Curing static on panel meter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-13 23:16:06 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <3cb8bb78_1@newsa.ev1.net>
Source record: 44761

Wipe it down with a damp cloth, or better yet use Endust anti-static spray.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"K9SQG" <k9sqg@aol.com> wrote in message
news:20020413082232.06506.00003200@mb-mo.aol.com...
> Have a plastic meter that was shipped to me. It was on zero when shipped
but
> reads 1/3 scale after shipment due to static electricity from the plastic
bag.
> Know of any remedies?
>
> 73s,
>
> Evan

2920. Re: Curing static on panel meter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 00:20:37 UTC
From: jcplpsm@aol.communicate
Message-ID: <20020413202037.01972.00003229@mb-df.aol.com>
Source record: 44762

>Wipe it down with a damp cloth, or better yet use Endust anti-static spray.

Use Static Guard, it works better. The Endust will only work temporarily.
Sprasy a little on a paper towel and wipe the meter face. You can find Static
Guard in the grocery store.

Scott M.
KA1MRO

2921. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 00:36:05 UTC
From: Bill & Suzie Whatley <spud286@attbi.com>
Message-ID: <V94u8.27885$CH1.25272@sccrnsc02>
Source record: 44763

I can not even understand your question at this point.

Try reading the info at www.amfone.net ..... look at "AM for the 21st century".

The article there explains it all very simply.

WA5VRL
Willis

2922. Re: PEV and PEP at 12 volts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 00:51:43 UTC
From: Bill Turner <w7ti@dslextreme.com>
Message-ID: <ddkhbucns9oq2si182hppc4qgbf2n9hpqq@4ax.com>
Source record: 44764

On Sat, 13 Apr 2002 14:22:57 -0700, Roy Lewallen <w7el@eznec.com> wrote:

>> RMS power = RMS V * RMS A
>
>No. Average power = Vrms * Irms (times the cosine of the angle between V
>and I if the impedance is reactive).
>
>> Avg power = Avg V * Avg A
>
>No. See above.

Ok, if you define average power as Vrms * Irms (as you do above), then
what do you call Vavg * Iavg? To me, that's average power. The other
is RMS power. They are two very different things.

Bill, W7TI

2923. Re: Curing static on panel meter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 01:24:48 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnabhmiv.1cf.QSB@animas.frontier.net>
Source record: 44765

On 14 Apr 2002 00:20:37 GMT, SAM scribbled:
>>Wipe it down with a damp cloth, or better yet use Endust anti-static spray.
>
> Use Static Guard, it works better. The Endust will only work temporarily.
> Sprasy a little on a paper towel and wipe the meter face. You can find Static
> Guard in the grocery store.

yep. Wiping it with a clothes dryer fabric softner
tissue [e.g. Bounce (tm)] will do the trick -- and,
make it smell better, too. :-)

Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

2924. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 01:50:29 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <a9an95$r1f$0@208.207.71.144>
Source record: 44766
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Gary - KJ6Q wrote:
>
> "Dick Carroll" <dixie@townsqr.com> wrote in message news:a97sni$6fg$0@208.206.142.69...
> >
> > > > >
> > > > >> I imagine they spread some fairly trashy signals, too. Once the amp is
> > > driven past the linear portion of the grid curve average output may go
> > > up some but it sure ain't linear any longer!
> > >
> > > Dick
> >
> > Probably true to a degree - but all things being equal which would YOU *honestly* choose
> - an amp
> > easily showing 2 KW OUT, key down, or one showing only 1200 watts out, under the same
> test
> > conditions... No fancy footwork now, just a quick honest answer! <grin>
> >
> > After all, MOST amps that will put out 2 KW at full grunt, will likely put out 1.5 KW
> pretty easily
> > and cleanly, all day long...

Oh, I agree! But driving (or ovderdriving) such an amp sure offers
little benefit vs. the costs (a new set of tubes) involved.
I never knew that a MLA2500 *could* output 2kw since I never saw it
from mine, even with new tubes. Of course mine is unmodified.

2925. Effects of wide loop BW (was Re: Phase noise (was Re: Hybrid PLL...))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 02:05:22 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CB8E3F8.2A26@pop.removethistomailme.net>
Source record: 44767
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Miles wrote:
>
> Richard Hosking wrote:
> >
> > By my calculations it would be worthwhile to
> > make F(comp) as high as possible
>
> Here's what happens on the ADF4112 with an Fcomp of 3.5 MHz (again, this
> is untestable on the LMX2326 because of its minimum-N requirement):
>
> http://www.qsl.net/ke5fx/misc/3mhz.gif
>
> At Fcomp=7 MHz the loop breaks into oscillation, so I backed the
> comparison frequency down to 3.5 MHz.
>
> If I had to guess, I'd say the OP27's gain-bandwidth product of 8 MHz is
> coming into play, causing the opamp to roll off the narrow correction
> pulses coming in from the charge pump. I'll add an OP37 (GBP=63 MHz) to
> my next Digikey order and see what effect it has.
>

After trying the OP37, it turns out the OP27 was really OK -- I had the wrong value for C1 in the loop filter. The OP27 and OP37 behave identically.

The results with a 3 MHz comparison frequency and 23 kHz loop bandwidth (C1=0.1 uF, C2=0.01 uF, C3=0.01 uF, R2=180 ohms, R3=82 ohms) are:

http://209.95.122.40/jm/hc150khz.gif
http://209.95.122.40/jm/hc110khz.gif
http://209.95.122.40/jm/hc12khz.gif
http://209.95.122.40/jm/hc1200hz.gif

These look VERY good close-in -- the best I've seen. The 200Hz/division plot actually represents the Tek 494's own phase-noise limits, rather than the synthesizer's.

However, the plots at 10 kHz/division and 50 kHz/division show that this approach would, in fact, result in worse adjacent-channel rejection than the existing design. At a 10 kHz offset, the noise with both loops is about -98 dBc/Hz. Beyond that, the original loop with the 2-3 kHz bandwidth (in purple) is dominated by wideband VCO noise, which improves rapidly as the offset increases. Conversely, the high-Fcomp, high-bandwidth loop doesn't really quiet down until reaching offsets of 50-100 kHz from the carrier.

In practical terms, the high-bandwidth loop has substantially worse rejection of DDS noise and spurs. Not only is the loop bandwidth itself wider, but the crystal filter has to be much wider as well to accommodate the extended DDS tuning range associated with the higher Fcomp. (It's possible to design for a narrow loop bandwidth *and* a high Fcomp, but the capacitor values get really large and, at least in some earlier tests I ran, stability suffers.)

It's hard to escape the conclusion that increasing Fcomp beyond a certain point -- 1 MHz or so -- is counterproductive. Keeping the DDS tuning range small is critical for spur performance, and trading wideband noise off for the sake of close-in noise doesn't seem to make sense for conventional voice-bandwidth communications.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2926. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 02:10:55 UTC
From: Gary - KJ6Q <davison7@gte.net>
Message-ID: <Py5u8.8957$8W5.7522@nwrddc02.gnilink.net>
Source record: 44768
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

"Dick Carroll" <dixie@townsqr.com> wrote in message news:a9an95$r1f$0@208.207.71.144...
>
>
> Gary - KJ6Q wrote:
> >
> > "Dick Carroll" <dixie@townsqr.com> wrote in message
news:a97sni$6fg$0@208.206.142.69...
> > >
> > > > >
> > > > >> I imagine they spread some fairly trashy signals, too. Once the amp is
> > > driven past the linear portion of the grid curve average output may go
> > > up some but it sure ain't linear any longer!
> > >
> > > Dick
> >
> > Probably true to a degree - but all things being equal which would YOU *honestly*
choose - an
amp
> > easily showing 2 KW OUT, key down, or one showing only 1200 watts out, under the same
test
> > conditions... No fancy footwork now, just a quick honest answer! <grin>
> >
> > After all, MOST amps that will put out 2 KW at full grunt, will likely put out 1.5 KW
pretty
easily
> > and cleanly, all day long...
>
>
> Oh, I agree! But driving (or ovderdriving) such an amp sure offers
> little benefit vs. the costs (a new set of tubes) involved.
> I never knew that a MLA2500 *could* output 2kw since I never saw it
> from mine, even with new tubes. Of course mine is unmodified.

You mighta missed THIS post from Bill M back up the thread:

"I've never owned the Dentron but I know two fellas who got them when
they first came out. They both easily did 2200 watts out keydown into a
dummy load, measured with a Bird wattmeter, one was using 110 vac. "

Apparently I am not the ONLY one seeing 2KW or better from these rigs - of course, SOME
critics here
will assert the Bird wattmeter used for the above measurement was probably out of
calibration... Or
the tester too stupid to know how to use it properly...

And yeah, it's possibly true that the output at that power might not be as clean as at lower
levels - but with as much "headroom" as 2KW or better provides, such an amp can CERTAINLY run cool
and clean down at 1.5KW - while one that has to strain at 1200 watts will be operating well into ITS
distortion/nonlinear stage LONG before even reaching the legal limit - so *I* would take the higher
powered option ANY time!

Remember - that's what this thread is ABOUT - the rationale of converting from tubes in an amp that
originally delivered 2KW or better output, to tubes only putting out 800-1200 watts (depending on
whose test methods you prefer) - at a cost in excess of $400...

--
Gary - KJ6Q
****
Two things we'll never see:
1. Perpetual motion...
2. A liberal Democrat complaining
about "Too much government"

2927. Re: PEV and PEP at 12 volts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 03:27:17 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CB8F715.FC863C4C@eznec.com>
Source record: 44769

I don't define the average power as Vrms * Irms. Average power is defined the same as the average value of any other waveform. I gave this definition in my previous posting. It just happens that the average power, when calculated using the accepted definition, equals Irms^2 * R or Vrms^2/R. And it also happens that a power waveform with an average power of 50 watts will cause the same amount of heating as a constant (DC) power of 50 watts.

If you're not interested in the mathematics behind these definitions and conclusions, then consult any reputable text, including the ARRL Handbook, read it carefully, and believe what it says. If you are interested in how and why the results are the way they are, maybe the following will help explain it.

The average power is defined as 1/T * the integral over a period of p(t) dt, where p(t) is the instantaneous value of the power, and T is the period. Now p(t) = i(t)^2 * R, where i(t), simplified as i, is the instantateous value of the current, and R the resistance. So the average power is 1/T * the integral over a period of i^2 * R. Assuming R doesn't change with time, we can take R outside the integral to get Pavg = R * 1/T * INT(i^2 dt). I've used INT to mean the integral over a period.

Now look at the definition of RMS current. Irms = sqrt(1/T * INT(i^2 dt)). So Irms^2 = 1/T * INT(i^2 dt). So from the equation for average power, you can see that Pavg = R * Irms^2. The reason Pavg is related to Irms in this way is that P is proportional to I^2. The same holds true for P and V. And this is true for any waveform of V and I -- they don't have to be sine waves.

Now, what do I call Vavg * Iavg? Just that, and nothing more. The relationship of this product to average power depends on the shapes of the waveforms. If V and I are DC, then Vavg * Iavg = Pavg. But for DC, Vavg = Vrms and Iavg = Irms. If V and I are sine waves with zero offset, then both Iavg and Vavg are zero, so their product is zero. Over a period, the voltage or current is positive for half the cycle, and negative for the other half, and it's at the same absolute value for the same length of time. So the average is zero.

Here's a numerical example using sine waves. Let's look at a voltage with peak value of 10 volts (20 volts p-p) and a current with peak value of 10 amps (20 amps p-p), with no DC offset, and both in phase. Mathematically, the both voltage and current can be expressed as 10*cos(omega*t), where omega = 2*pi*frequency. The period T of these waves is 1/f. So the average voltage or current = 1/T * INT(10*cos(omega*t) dt) = f/omega * (10 * sin(omega*t)) evaluated over a period = zero, as I mentioned.

Sometimes, "average" voltage or current is used to mean the average of the absolute value of the waveform. This is often used when describing the response of analog meters, since the meter movement mechanically averages the rectified (absolute value) voltage. So I'll include a calculation using this meaning. To get the average of the absolute value, we can evaluate the integral over the positive half cycle and double the result. This gives 40*f/omega = 40/(2*pi) = 6.37 volts or amps. Squaring this we get 40.53 watts.

It's well known that the RMS value of the voltage or current is about 0.7071 times the peak value, or 7.071 for our example voltage or current. Let's see if we can get that by directly using the definition of RMS. Vrms = sqrt(1/T * INT(v^2 dt)) = sqrt(1/T * INT(100*cos^2(omega*t) dt)) = 10 * sqrt(1/2T * (t + sin(2*omega*t)/(2*omega))) evaluated over a period = 10 * sqrt(f/2 * 1/f) = 10 * sqrt(1/2) = 7.071 volts. The RMS value of the current in our example is then of course also 7.071 amps. The product of Vrms and Irms is 50 watts.

Now let's calculate the average power directly, from the definition. Pavg = 1/T * INT(p dt) = 1/T * INT(vi dt) = 1/T * INT(100*cos^2(omega*t) dt) = 100 * 1/2T * (t + sin(2*omega*t)/(2*omega)) evaluated over a period = 100 * f/2 * 1/f = 50 watts. So the average power = Irms * Vrms, not Iavg * Vavg (which is zero), or the product of the averages of the absolute values of the voltage and current waveforms (which is 40.53 watts).

Just out of curiosity, let's see what the RMS power is. It's sqrt(1/T * INT(p^2 dt)) = sqrt(1/T * INT(v^2 * i^2 dt)) = sqrt(1/T * INT(10000*cos^4(omega*t) dt)) = 100 * sqrt(1/T * (3*t/8 + [sin 2*omega*t term + sin 4*omega*t term]) evaluated over a period. The last two terms weren't written out becuase they evaluate to zero anyway. Continuing, Prms = 100 * sqrt(f * 3/(8*f)) = 100 * sqrt(3/8) = 61.24 watts. Interesting, but of no real use. And you can see it's not equal to Irms * Vrms.

I mentioned some time ago in this newsgroup -- and got a certain amount of flak for it -- that I was a lousy student. I'd appreciate it very much if those of you who really paid attention in freshman calculus and circuit analysis would look over my work and correct any errors you find.

This has been a lot more interesting, although nearly as tedious, as doing my taxes. But that's what I really need to be doing, so I'll get back to work now.

Roy Lewallen, W7EL

Bill Turner wrote:
>
> Ok, if you define average power as Vrms * Irms (as you do above), then
> what do you call Vavg * Iavg? To me, that's average power. The other
> is RMS power. They are two very different things.

>
> Bill, W7TI

2928. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 04:07:13 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CB90071.1A780F62@netscape.net>
Source record: 44770
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Gary - KJ6Q wrote:
>
>
> You mighta missed THIS post from Bill M back up the thread:
>
> "I've never owned the Dentron but I know two fellas who got them when
> they first came out. They both easily did 2200 watts out keydown into a
> dummy load, measured with a Bird wattmeter, one was using 110 vac. "
>
> Apparently I am not the ONLY one seeing 2KW or better from these rigs - of course, SOME
critics here
> will assert the Bird wattmeter used for the above measurement was probably out of
calibration... Or
> the tester too stupid to know how to use it properly...
>
> And yeah, it's possibly true that the output at that power might not be as clean as at
lower
> levels - but with as much "headroom" as 2KW or better provides, such an amp can CERTAINLY
run cool
> and clean down at 1.5KW - while one that has to strain at 1200 watts will be operating
well into ITS
> distortion/nonlinear stage LONG before even reaching the legal limit - so *I* would take
the higher
> powered option ANY time!
>
> Remember - that's what this thread is ABOUT - the rationale of converting from tubes in
an amp that
> originally delivered 2KW or better output, to tubes only putting out 800-1200 watts
(depending on
> whose test methods you prefer) - at a cost in excess of $400...
>
> --
> Gary - KJ6Q

Geez, I feel stoopid now. In the late 70s when guys were gobbling up
the Dentrons I never heard of one putting out less than 2kw key down.
Both my friends who had them were very active DXers and the tubes were
cooked in less than two years. One guy sprang for retubing, the other
bought another amp. They knew they were abusing the amp...at the time
nobody knew how long they would (or would not) last.
I don't question at all that the MLA-2500 is (was) not beefy enough to
do this kind of power on any regular basis. Shoot, the pwr xfmr is
about the size of the one for my Galaxy 5 transceiver which is good for

about 200 w out with fresh tubes. And I remember both these guys replacing other parts which had 'melted down'. Putting the Dentron in the context of what I was used to seeing in that era, I thought at the time that it was very cheaply built....certainly not up to par with MY homebrew pair of 4-400As that only put out 600-800w.
That being said, jazzing it up with different tubes to run 2kw+ out isn't such a good idea anyway but the headroom would be nice.

-Bill WX4A

2929. Re: filter caps NEED HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 04:15:24 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <wn7u8.10346$HH5.730@rwcrnsc51.ops.asp.att.net>
Source record: 44771

Chris -

I understand the Antique Electronic Supply has some shipments of "new runs" of twist lock capacitors coming and in stock .. call them for details. Everett Hoard, who is also an amateur, can fix you up with what ever you need ...HE RE BUILDS the CAN CAPACITORS ... if the twist lock is no longer available .. he can fix you up as well.

Happy hunting

Greg
w9gb
Antique Electronic Supply
6221 S Maple Avenue
Tempe, AZ 85283
Phone 480-820-5411; Fax 800-706-6789 (U.S. and Canada) or 480-820-4643
http://www.tubesandmore.com/; e-mail info@tubesandmore.com

Over 10,000 square feet of: Tubes, books, transformers, sockets, friendly folks, capacitors, resistors, literature, cabinet restoration materials, friendly folks, wire, grill cloth, gifts, tools, information...and did I mention the friendly folks?

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Everett Hoard, Owner
403 S. McIntosh St.
Box 218
Lehr, ND 58460
Phone: (877) 372-2341; Fax (701) 378-2551

"Our business is selling capacitors." Nichicon brand is our main electrolytic line. All electrolytic are new. We offer substantial stocks of silver mica caps. We also rebuild can type capacitors. We will not rebuild any twist-lock type which is available from any supplier. Call or write Frontier for brochure.

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740 Belleville Avenue
New Bedford, MA 02745
Telephone: (508) 994-9661; Fax: (508) 999-1000
http://www.aerovox.com

Aerovox manufactures AC capacitors, DC film capacitors, aluminum electrolytic capacitors, power factor correction capacitors, and EMI filters. The company sells its products worldwide, primarily to original equipment manufacturers (OEMs) of electrical and electronic equipment. Markets for Aerovox products include motors, lighting fixtures, power

electronics, microwave ovens, medical and industrial equipment, experimental physics, traction drives, high voltage power supplies, and flash lamps.

"NI4L" <ni4l@charter.net> wrote in message
news:3CB84C86.F79E7ABE@charter.net...
> i have a clipperon L i'm reworking. it has the bill edwards tuned input
> board which because of the size and limited space on height and width is
>
> giving me a problem.
> if i use a can type a hair over 4" in height all i can put in and
> really no bigger round that 1 3/8" can you suggest something? 3 1/2"
> wide 6" length 4" high is my working space. would like to use 450 to 500
>
> v at say 300 to 450mf caps need 8 total or a oil cap rated about 32 mf
> at 4 or 5 kv if i can find something to fit.
> can anyone help?
> thanks chris NI4L
>
> --
>
> NI4L CUSTOM RESONANT DIPOLE
> LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
> Made with the same components used by our military forces today
> Custom made to YOUR FREQUENCY of operation
> Let me take the hassle out of making a RESONANT DIPOLE for you.
> Click here for more info... http://www.angelfire.com/nb/ni4l/
>
>

2930. Re: filter caps NEED HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 04:26:12 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <Ex7u8.9372$V44.483@rwcrnsc53>
Source record: 44772

Contract Harbach for your capacitor size replacement at 140
(Computer grade in stock)
http://www.harbachelectronics.com/

Some parts sites that may be of help"

http://www.economyelectronics.com/

http://www.tomstubes.com/amp-conversions/

http://www.ezlink.com/~crash/parks/caps.html

w9gb

"NI4L" <ni4l@charter.net> wrote in message
news:3CB84C86.F79E7ABE@charter.net...
> i have a clipperon L i'm reworking. it has the bill edwards tuned input
> board which because of the size and limited space on height and width is
>
> giving me a problem.
> if i use a can type a hair over 4" in height all i can put in and
> really no bigger round that 1 3/8" can you suggest something? 3 1/2"
> wide 6" length 4" high is my working space. would like to use 450 to 500
>
> v at say 300 to 450mf caps need 8 total or a oil cap rated about 32 mf
> at 4 or 5 kv if i can find something to fit.
> can anyone help?
> thanks chris NI4L
>
> --
>
> NI4L CUSTOM RESONANT DIPOLE
> LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
> Made with the same components used by our military forces today
> Custom made to YOUR FREQUENCY of operation
> Let me take the hassle out of making a RESONANT DIPOLE for you.
> Click here for more info... http://www.angelfire.com/nb/ni4l/
>
>

2931. Re: PEV and PEP at 12 volts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 05:05:20 UTC
From: Bill Turner <w7ti@dslextreme.com>
Message-ID: <hj1ibu0bh176vu167k16ss1tjepordrus4@4ax.com>
Source record: 44773

On Sat, 13 Apr 2002 20:27:17 -0700, Roy Lewallen <w7el@eznec.com> wrote:

>I mentioned some time ago in this newsgroup -- and got a certain amount
>of flak for it -- that I was a lousy student. I'd appreciate it very
>much if those of you who really paid attention in freshman calculus and
>circuit analysis would look over my work and correct any errors you
>find.

I'll take your word for the advanced math. My forte is English.

It seems clear that if:

Ppeak = Vpeak * Ipeak,

then it follows that

Prms = Vrms * Irms and

Pavg = Vavg * Iavg,

since power of any kind is the product of the V and I of that same kind,
regardless of what kind it is - peak, DC, RMS, whatever, as long as you
are careful to be consistent. To define the power terms any other way
is illogical and inconsistent.

Note that I'm talking resistive power only; reactive circuitry is
another discussion.

I think I would be satisfied if someone can explain why the three
formulas above are incorrect. Why power of one kind isn't derived from
the V and I of the same kind. That's my whole point.

Bill, W7TI

2932. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 06:37:13 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <a9b82p$d6u$0@208.206.142.84>
Source record: 44775
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Gary - KJ6Q wrote:
>
> "Dick Carroll" <dixie@townsqr.com> wrote in message news:a9an95$r1f$0@208.207.71.144.

> > Oh, I agree! But driving (or ovderdriving) such an amp sure offers
> > little benefit vs. the costs (a new set of tubes) involved.
> > I never knew that a MLA2500 *could* output 2kw since I never saw it
> > from mine, even with new tubes. Of course mine is unmodified.
>
> You mighta missed THIS post from Bill M back up the thread:
>
> "I've never owned the Dentron but I know two fellas who got them when
> they first came out. They both easily did 2200 watts out keydown into a
> dummy load, measured with a Bird wattmeter, one was using 110 vac. "
>

I also saw something about cutting out the grid swamping resistor to
make the amp output more than it was designed to do. Mine didn't get
that mod.

> Apparently I am not the ONLY one seeing 2KW or better from these rigs - of course, SOME
critics here
> will assert the Bird wattmeter used for the above measurement was probably out of
calibration... Or
> the tester too stupid to know how to use it properly...
>
> And yeah, it's possibly true that the output at that power might not be as clean as at
lower
> levels - but with as much "headroom" as 2KW or better provides, such an amp can CERTAINLY
run cool
> and clean down at 1.5KW - while one that has to strain at 1200 watts will be operating
well into ITS
> distortion/nonlinear stage LONG before even reaching the legal limit - so *I* would take
the higher
> powered option ANY time!

I'd want to do a linearity test to check that out. As for me, I've
always been able to do anything I wanted or needed with mine at the
lower power level, things such as work VK0IR on a nearly dead 20 meter
CW band where they couldn't copy me barefoot.

>
> Remember - that's what this thread is ABOUT - the rationale of converting from tubes in
an amp that
> originally delivered 2KW or better output, to tubes only putting out 800-1200 watts

(depending on
> whose test methods you prefer) - at a cost in excess of $400...

Somewhere it drifted off to the MLA's design capabilities.

Dick W0EX

2933. RE: S2001A TUBE, HELP YOUR DATES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 06:40:00 UTC
From: Tito Tavella <lu6dbu@infovia.com.ar>
Message-ID: <a9b7e0$1ma7c$1@ID-103975.news.dfncis.de>
Source record: 44774
Cross-posted to: rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hi:
I have not a data sheet the S2001A tube.

Anyone maybe help?
TKS
TITO TAVELLA
LU6DBU

Claude Frantz <claude@pc0312a.rz.unibw-muenchen.de> escribi&#65533; en el mensaje
de noticias 3CB40054.9449BED1@pc0312a.rz.unibw-muenchen.de...
> J M Noeding wrote:
>
> > isn't it just a version of 6146B which Kenwood used...
>
> Do you have a data sheet of the S2001A ?

2934. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 06:50:55 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CB926CF.3B444468@netscape.net>
Source record: 44776
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Dick Carroll wrote:

> I also saw something about cutting out the grid swamping resistor to
> make the amp output more than it was designed to do. Mine didn't get
> that mod.

Bingo! I hate to keep jumping into this thread since I never owned one, but that was the FIX of the era now that you remind me! That might explain the disparity between the 2kw+ ones and the measly 1.4kw examples.

-Bill WX4A

2935. Updated one transistor receiver 'Radio Shack Special'...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 07:11:07 UTC
From: braincambre500@yahoo.com
Message-ID: <85a87c6c.0204132311.202cb9cf@posting.google.com>
Source record: 44777

Hello all,

I just updated and improved the one transistor FM receiver. I have
been constantly working on it to make it the best I can. I had stray
hand capacitance when operating the tuning capacitor...now with the
whole PCB, front and back, covered in copper...the 'stray went away'!

Also, I am just using a 10 inch antenna, bringing in 24 stations in my
area.

I wanted to let anyone know that this is a marvalous little week-end
project.

...do go and see the updated 'Radio Shack Special', at:

http://braincambre500.freeservers.com

I want to thank everyone for their time in
reading
my request.

Sincerely,

Patrick Cambre

2936. Re: PEV and PEP at 12 volts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 07:22:01 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CB92E19.F55FA280@eznec.com>
Source record: 44778

I've tried my best. Sorry, that's all I can do.

Roy Lewallen, W7EL

Bill Turner wrote:
>
> On Sat, 13 Apr 2002 20:27:17 -0700, Roy Lewallen <w7el@eznec.com> wrote:
>
> >I mentioned some time ago in this newsgroup -- and got a certain amount
> >of flak for it -- that I was a lousy student. I'd appreciate it very
> >much if those of you who really paid attention in freshman calculus and
> >circuit analysis would look over my work and correct any errors you
> >find.
> --
>
> I'll take your word for the advanced math. My forte is English.
>
> It seems clear that if:
>
> Ppeak = Vpeak * Ipeak,
>
> then it follows that
>
> Prms = Vrms * Irms and
>
> Pavg = Vavg * Iavg,
>
> since power of any kind is the product of the V and I of that same kind,
> regardless of what kind it is - peak, DC, RMS, whatever, as long as you
> are careful to be consistent. To define the power terms any other way
> is illogical and inconsistent.
>
> Note that I'm talking resistive power only; reactive circuitry is
> another discussion.
>
> I think I would be satisfied if someone can explain why the three
> formulas above are incorrect. Why power of one kind isn't derived from
> the V and I of the same kind. That's my whole point.
>
> Bill, W7TI

2937. Re: 6:1 balun

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 07:26:54 UTC
From: Jason <kc7eip_nospam@shaw.ca>
Message-ID: <2bau8.29604$de1.1417569@news3.calgary.shaw.ca>
Source record: 44779

Well the antenna i am trying to mate up is a Distributed Capacitance Twisted Loop made out of 300 ohm tv antenna..http://marty.w.tripod.com/antennas.html.. Now i know there are several options other then this antenna that i could use.. Simple dipole or maby a verticle... both of which would be easier to design and match to the radio.. unfortunately i do not have the space to put up a dipole for 80 or 40 i could posibly put one up for 20 but license restrictions prevent that option... i have the room for a vert except i could not get the apropriate groundplane set up due to space requirements... and the loss due to ground loss would take up too much of my low power anyway.. so i am stuck with this antenna..hopefully it works... i would have hooked it up streight but do not wish to loose my transistors or something else in the radio due to swr problems.. :(

".Bill :-)" <TheRealExray@netscape.net> wrote in message news:3CB8A05B.9939AE44@netscape.net...
> Jason wrote:
> >
> > Trying to figure out a workable 6 to 1 balun for use with a pixieII and a
> > resonant antenna cut for 3.6864 ..a 4 to 1 would get me down to 75 ohm but i
> > do not have a tuner so the closer to 50 the better... any suggestions?
>
> What kind of antenna is this? Folded dipole?
> -Bill
>

2938. Re: Castro used a BC348?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 09:25:39 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <nCnmcEFTsUu8Ew98@fslife.co.uk>
Source record: 44782

Mike,

>Their cars are a joke and their 'planes fall out of the sky.. but I'd
>love to visit Cuba, Sadly I don't think I'll ever get there.
Nor can you knock the cars.

If you've seen those old Chevy taxi's, many have over a million miles on
the clock!

They don't get maintained at your drive-in Autolube.

The planes are something else.

Carried over from the Cruschev era.

Tupolov's or whatever they call them can however run on anything, just
like the Lada cars back home in Russia.

You can take the tail fin off and she'll still stay up:-)

--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

2939. Re: PEV and PEP at 12 volts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 09:47:40 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <6q9ibu87kpanr73nipk024pgmpb9nq228f@4ax.com>
Source record: 44780

On Sat, 13 Apr 2002 17:51:43 -0700, Bill Turner <w7ti@dslextreme.com>
wrote:

>Ok, if you define average power as Vrms * Irms (as you do above),

The average power is a very useful entity e.g. when measuring the
mechanical power applied to a generator or the heat dissipated in a
resistor.

Apparently only in English is this cumbersome rms (root-mean-square)
expression used with voltages or currents to tell the equivalent DC
voltage or current to produce the same heating of the resistor.

In other languages expressions like tehollisarvo (Finnish),
effektivvï¿½rde (Swedish), Effectivwert (German), valeur effectiv
(French) etc. are all referring to the effective value of the
equivalent DC circuit.

For a sinusoidal, these are calculated P = Vrms*Irms*cos(phi), in
which phi is the angle between voltage and current and the unit is
[W]. Don't mix this with the apparent power Vrms*Irms, which is
measured in [VA] regardless of the angle between voltage and current.
The apparent power can be large, but the effective value can be 0, if
the angle between the voltage and current is +/-90 degrees.

>then what do you call Vavg * Iavg?

What would you call Vpeak*Iavg*4.7 or Vavg * Iavg / 2 ?

Since all these do not represent any usable physical quantity, why
should they have a specific name ?

One might also ask, what is Vavg or Iavg for an AC circuit. You could
very well argue that they are both 0 for a true sinusoidal AC
waveform. Only when the waveform is distorted with even order
harmonics, there will be a small DC component, which you could call
Vavg :-).

Iavg is a useful quantity for _DC_ measurements, e.g. when a load
current is varying and you want to measure how much charge has been
extracted from a battery (Q = Iavg * t).

Paul OH3LWR

2940. Re: 6:1 balun

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 09:55:09 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <Zkeu8.15484$tZ1.4847675@news2-win.server.ntlworld.com>
Source record: 44785

> Well the antenna i am trying to mate up is a Distributed Capacitance
Twisted
> Loop made out of 300 ohm tv
> antenna..http://marty.w.tripod.com/antennas.html.. Now i know there are
> several options other then this antenna that i could use.. Simple dipole
or
> maby a verticle... both of which would be easier to design and match to
the
> radio.. unfortunately i do not have the space to put up a dipole for 80 or
> 40 i could posibly put one up for 20 but license restrictions prevent that
> option... i have the room for a vert except i could not get the apropriate
> groundplane set up due to space requirements... and the loss due to
ground
> loss would take up too much of my low power anyway.. so i am stuck with
this
> antenna..hopefully it works... i would have hooked it up streight but do
not
> wish to loose my transistors or something else in the radio due to swr
> problems.. :(
============
The fact that your antenna is made of 300 Ohms tv ribbon ,does not
necessarily mean its impedance at the frequencies used is 300 Ohms.
Suggest you get hold of an antenna analyser of the MFJ or Autek variety (eg
borrow from a friendly fellow Ham) and determine the impedance. Only then
you can define your needs for any balun /impedance transformer. But measure
with the antenna in its operating position.
I am sure you will be very surprised when measuring the actual impedance
directly with one of the above or similar instruments.
Good luck

Frank gm0csz.kn6wh@ntlworld.com

2941. Re: filter caps NEED HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 10:07:59 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <_keu8.15485$tZ1.4847828@news2-win.server.ntlworld.com>
Source record: 44784

> i have a clipperon L i'm reworking. it has the bill edwards tuned input
> board which because of the size and limited space on height and width is
>
> giving me a problem.
> if i use a can type a hair over 4" in height all i can put in and
> really no bigger round that 1 3/8" can you suggest something? 3 1/2"
> wide 6" length 4" high is my working space. would like to use 450 to 500
>
> v at say 300 to 450mf caps need 8 total or a oil cap rated about 32 mf
> at 4 or 5 kv if i can find something to fit.
> can anyone help?
> thanks chris NI4L
==========
Oil caps (no PCBs) are definitely preferred ; problem might be finding the space in existing cabinet.
Peter Dahl -El Paso -TX usually has a large variety and stock of these HV caps ; another possible source is Surplus Sales of Nebraska (usually the expensive option)

Frank gm0csz.kn6wh@ntlworld.com

2942. Re: S2001A TUBE, HELP YOUR DATES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 10:09:35 UTC
From: Choky <choky*remove*@eunet.yu>
Message-ID: <a9blesqdf2@news.eunet.yu>
Source record: 44781
Cross-posted to: rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

according to Vade Mecum:
same as 913;

data:
Uf=6V3
If=0.6A
Ug1= -250V
Ua1=100V
Ua2=500V
St=0.07 mm/V
Sm=0.1mm/V
Colour-green
Fi=1"
P/m (persistence medium)

base:
huh-little tricky for this type of looking; if you need base,mail and I'll scan that for you ;)

--
Choky
Prodanovic Aleksandar
choky*remove*@eunet.yu
YU
remove *remove* to reply!!
==========
"Tito Tavella" <lu6dbu@infovia.com.ar> wrote in message
news:a8qldf$ujn2r$1@ID-103975.news.dfncis.de...
> Hello, i have a pair of 2001A tubes, but not have dates him. Anyhone maybe
> help?
> Thanks
> TITO
> LU6DBU
> Argentina Amateur Radio Station
>
>

2943. Re: Effects of wide loop BW (was Re: Phase noise (was Re: Hybrid PLL...))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 11:58:25 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3cb96d3a$0$19124@echo-01.iinet.net.au>
Source record: 44783
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John
What happens if you use a crystal (or equivalent) reference for the loop at the two different frequencies?
The DDS should be nearly as good as its crystal reference as far as random phase noise goes, with the main problem being coherent phase and amplitude spurs. However none of these appear on the plots you have shown. It should be possible to separate out the effect of the DDS/reference from the effect of the loop.

Richard

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message news:3CB8E3F8.2A26@pop.removethistomailme.net...
> John Miles wrote:
> >
> > Richard Hosking wrote:
> > >
> > > By my calculations it would be worthwhile to
> > > make F(comp) as high as possible
> >
> > Here's what happens on the ADF4112 with an Fcomp of 3.5 MHz (again, this
> > is untestable on the LMX2326 because of its minimum-N requirement):
> >
> > http://www.qsl.net/ke5fx/misc/3mhz.gif
> >
> > At Fcomp=7 MHz the loop breaks into oscillation, so I backed the
> > comparison frequency down to 3.5 MHz.
> >
> > If I had to guess, I'd say the OP27's gain-bandwidth product of 8 MHz is
> > coming into play, causing the opamp to roll off the narrow correction
> > pulses coming in from the charge pump. I'll add an OP37 (GBP=63 MHz) to
> > my next Digikey order and see what effect it has.
> >
>
> After trying the OP37, it turns out the OP27 was really OK -- I had the
> wrong value for C1 in the loop filter. The OP27 and OP37 behave
> identically.
>
> The results with a 3 MHz comparison frequency and 23 kHz loop bandwidth
> (C1=0.1 uF, C2=0.01 uF, C3=0.01 uF, R2=180 ohms, R3=82 ohms) are:
>
> http://209.95.122.40/jm/hc150khz.gif
> http://209.95.122.40/jm/hc110khz.gif
> http://209.95.122.40/jm/hc12khz.gif

> http://209.95.122.40/jm/hc1200hz.gif
>
> These look VERY good close-in -- the best I've seen. The 200Hz/division
> plot actually represents the Tek 494's own phase-noise limits, rather
> than the synthesizer's.
>
> However, the plots at 10 kHz/division and 50 kHz/division show that this
> approach would, in fact, result in worse adjacent-channel rejection than
> the existing design. At a 10 kHz offset, the noise with both loops is
> about -98 dBc/Hz. Beyond that, the original loop with the 2-3 kHz
> bandwidth (in purple) is dominated by wideband VCO noise, which improves
> rapidly as the offset increases. Conversely, the high-Fcomp,
> high-bandwidth loop doesn't really quiet down until reaching offsets of
> 50-100 kHz from the carrier.
>
> In practical terms, the high-bandwidth loop has substantially worse
> rejection of DDS noise and spurs. Not only is the loop bandwidth itself
> wider, but the crystal filter has to be much wider as well to
> accommodate the extended DDS tuning range associated with the higher
> Fcomp. (It's possible to design for a narrow loop bandwidth *and* a
> high Fcomp, but the capacitor values get really large and, at least in
> some earlier tests I ran, stability suffers.)
>
> It's hard to escape the conclusion that increasing Fcomp beyond a
> certain point -- 1 MHz or so -- is counterproductive. Keeping the DDS
> tuning range small is critical for spur performance, and trading
> wideband noise off for the sake of close-in noise doesn't seem to make
> sense for conventional voice-bandwidth communications.
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

2944. Re: 6:1 balun

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 12:33:10 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3cb9755e$0$19143@echo-01.iinet.net.au>
Source record: 44786

If it is a small antenna and not far above ground, its actual radiation resistance is likely to be quite low, ie much less than 300 ohms. In fact you may need the balun with the high impedance on the transmitter side as the impedance might only be 10-20 ohms
It would be best to measure the impedance by some method.
Say cut/tune the antenna to resonance (use a GDO or similar) and measure the impedance using a 1:1 and 4:1 balun to the antenna using a noise bridge. You could then work out the best scheme to match to your transmitter.

Richard
.
"Jason" <kc7eip_nospam@shaw.ca> wrote in message
news:2bau8.29604$de1.1417569@news3.calgary.shaw.ca...
> Well the antenna i am trying to mate up is a Distributed Capacitance
Twisted
> Loop made out of 300 ohm tv
> antenna..http://marty.w.tripod.com/antennas.html.. Now i know there are
> several options other then this antenna that i could use.. Simple dipole
or
> maby a verticle... both of which would be easier to design and match to
the
> radio.. unfortunately i do not have the space to put up a dipole for 80 or
> 40 i could posibly put one up for 20 but license restrictions prevent that
> option... i have the room for a vert except i could not get the apropriate
> groundplane set up due to space requirements... and the loss due to
ground
> loss would take up too much of my low power anyway.. so i am stuck with
this
> antenna..hopefully it works... i would have hooked it up streight but do
not
> wish to loose my transistors or something else in the radio due to swr
> problems.. :(
>
> ".Bill :-)" <TheRealExray@netscape.net> wrote in message
> news:3CB8A05B.9939AE44@netscape.net...
> > Jason wrote:
> > >
> > > Trying to figure out a workable 6 to 1 balun for use with a pixieII
and
> a
> > > resonant antenna cut for 3.6864 ..a 4 to 1 would get me down to 75 ohm
> but i
> > > do not have a tuner so the closer to 50 the better... any suggestions?
> >

> > What kind of antenna is this? Folded dipole?
> > -Bill
> >
>
>

2945. Cornell-Dubilier computer grade

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 13:40:58 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <KFfu8.33383$CH1.27465@sccrnsc02>
Source record: 44787

http://www.harbachelectronics.com/

Look under caps ... mentions the Dentron specifically

CP-140 SET OF 6 MATCHED 140mF 450VDC COMPUTER GRADE CAPACITORS W/ MOUNTING SCREWS The CP-140 is a matched set of 6 140mF 450VDC computer grade capacitors by Cornell-Dubilier. Also included are the mounting screws with lock washers. These are perfect for HV power supplies and amp builders. They can also be used to replace bad caps in Dentron and other amplifiers. Capacitor size is 3-3/8" x 1-3/8". The cost for the set is $48, USA & Canada shipping included. Sales tax for Indiana residents is $2.40.

"NI4L" <ni4l@charter.net> wrote in message
news:3CB84C86.F79E7ABE@charter.net...
> i have a clipperon L i'm reworking. it has the bill edwards tuned input
> board which because of the size and limited space on height and width is
>
> giving me a problem.
> if i use a can type a hair over 4" in height all i can put in and
> really no bigger round that 1 3/8" can you suggest something? 3 1/2"
> wide 6" length 4" high is my working space. would like to use 450 to 500
>
> v at say 300 to 450mf caps need 8 total or a oil cap rated about 32 mf
> at 4 or 5 kv if i can find something to fit.
> can anyone help?
> thanks chris NI4L
>
> --
>
> NI4L CUSTOM RESONANT DIPOLE
> LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
> Made with the same components used by our military forces today
> Custom made to YOUR FREQUENCY of operation
> Let me take the hassle out of making a RESONANT DIPOLE for you.
> Click here for more info... http://www.angelfire.com/nb/ni4l/
>
>

2946. Re: PEV and PEP at 12 volts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 13:44:57 UTC
From: Bill Turner <w7ti@dslextreme.com>
Message-ID: <0l1jbusrlnjjqhq89kqi60nthkbd8t2u82@4ax.com>
Source record: 44788

On Sun, 14 Apr 2002 12:47:40 +0300, Paul Keinanen <keinanen@sci.fi>
wrote:

>One might also ask, what is Vavg or Iavg for an AC circuit. You could
>very well argue that they are both 0 for a true sinusoidal AC
>waveform. Only when the waveform is distorted with even order
>harmonics, there will be a small DC component, which you could call
>Vavg :-).

Quite correct, Vavg for a complete cycle of a sine wave would be zero.

I wouldn't take hold of it, however. :-)

Bill, W7TI

2947. Re: 6:1 balun

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 14:06:08 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CB98CD0.ADED47A2@netscape.net>
Source record: 44789

Jason wrote:
>
> Well the antenna i am trying to mate up is a Distributed Capacitance Twisted
> Loop made out of 300 ohm tv
> antenna..http://marty.w.tripod.com/antennas.html.. Now i know there are
> several options other then this antenna that i could use.. Simple dipole or
> maby a verticle... both of which would be easier to design and match to the
> radio.. unfortunately i do not have the space to put up a dipole for 80 or
> 40 i could posibly put one up for 20 but license restrictions prevent that
> option... i have the room for a vert except i could not get the apropriate
> groundplane set up due to space requirements... and the loss due to ground
> loss would take up too much of my low power anyway.. so i am stuck with this
> antenna..hopefully it works... i would have hooked it up streight but do not
> wish to loose my transistors or something else in the radio due to swr
> problems.. :(

Interesting antenna. Never seen that one before.
The author doesn't make any mention of the feedpoint impedance at
resonance and mentions the tuner and xfmr/balun in the context of
widening the bandwidth. Although he's using 300 ohm feeder I don't
think you can assume the feedpoint impedance is 300 ohms.
I'm at a loss as to what to suggest in this case apart from getting or
building a tuner. I'll defer to the sharper brains on the subject.
-Bill

2948. Re: 6:1 balun

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 14:27:02 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ubj4lfbjnbq6a6@corp.supernews.com>
Source record: 44790

At low power like a Pixie, you can simply wind a transformer on an FT50-43 or even an FT37-43. I successfully did something similar to use a random loop at powers up to 30 watts.

What I did, and I have no idea how valid it is, was calculated the primary to present 50 ohms of impedance at the operating frequency. I may have quite a bit of reactance in this lashup, though, I'm using a tuner after it. The transformer makes it a bit of an easier job for the tuner. Works quite well to get me on 80 where I don't have the space for a proper antenna. I understand, though, that the theoretical basis is pretty shaky.

Given that you have a pretty much fixed configuration, you might consider measuring the antenna as suggested by others, then calculating a pi network to do the match. A little bit of extra harmonic reduction wouldn't hurt with a Pixie.

..

"Jason" <kc7eip_nospam@shaw.ca> wrote in message
news:_40u8.28503$ir6.1194609@news1.calgary.shaw.ca...
> Trying to figure out a workable 6 to 1 balun for use with a pixieII and a
> resonant antenna cut for 3.6864 ..a 4 to 1 would get me down to 75 ohm but
i
> do not have a tuner so the closer to 50 the better... any suggestions?
>
>

2949. Re: PEV and PEP at 12 volts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 17:57:26 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <3CB9C306.359A22E5@one.net>
Source record: 44791

Thanks, George. It wasn't so much a slip of the key as a lax moment. I haven't used these design prinicples in years, and I was last doing class C amps and cared mainly about average power.

It's been interesting to read all the follow-on postings this has led to. My compliments to Roy especially for his discussion of peak/rms/average issues, which can really be dealt with clearly only if you use the mathematics (the true definitions) in addition to the words. It's a bit of a shame that we can't represent it well in ASCII, though (how *would* one do an integral sign :-)

... Rich

"George, W5YR" wrote:
>
> Probably a slip of the key, but the formula you used gives average power
> not peak envelope power.
>
> Taking the p-p value and dividing by two gives the peak value. Multiplying
> that by 0.707 (assuming that it is a sinewave and not some complex
> waveshape) fives the rms amplitude of the wave. Squaring that and dividing
> by the value of load resistance across which the voltage was measured gives
> the average or root-mean-square power.
>
> Apart from that, though, the real answer to your dilemma lies in impedance
> matching, specificially with step-up transformers that can increase the
> peak-to-peak voltage at the output load.
>
> 73/72/oo, George W5YR - the Yellow Rose of Texas
> Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
> Amateur Radio W5YR, in the 56th year and it just keeps getting better!
> QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
> Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437
>
> All outgoing email virus-checked by Norton Anti-Virus 2002
>
> lightmetal wrote:
> >
> > I am building an amplifier strip to take 1mw up to about 1w. I am
> > using 4 driver stages with an IRF510 final.
> >
> > I am seeing about 7.05 volts peak-to-peak into a 50ohm resistive load
> > on the scope. Using the following formula, this would translate into
> > about 125mw.
> >

> > PEP = (Peak-to-peak/2*.707)^2/50
> >
> > The IRF510 output circuit was borrowed from a CW amp. I rebiased the
> > amp to run Class A.
> >
> > Given the 12 volt supply, I won't ever see more than 12 volts peak to
> > peak out of this amp, correct? That would translate into 360mw.
> >
> > So how do people get more than 360mw out of a 12v supply without
> > voltage doubles, etc.? I've seen a number of circuits that suggest
> > this.
> >
> > Am I missing something?

2950. Re: Curing static on panel meter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 18:47:53 UTC
From: daves radio electronics <davesradio@alltel.net>
Message-ID: <a9ciudmbc1@iac5.navix.net>
Source record: 44792

try a degousing coil

drc

".Bill :-)" <TheRealExray@netscape.net> wrote in message
news:3CB82D2C.CF9CD885@netscape.net...
> "Bob Lewis (AA4PB)" wrote:
> >
> > > Have a plastic meter that was shipped to me. It was on zero when
> > shipped but
> > > reads 1/3 scale after shipment due to static electricity from the
> > plastic bag.
> > > Know of any remedies?
> > >
> > I've had them do that while installed. Rubbing a slightly damp cloth
> > across the front of the meter usually cures it (at least for a while).
>
> I've heard of wiping them with one of those anti-static clothes dryer
> sheets. Never done it myself, but worth a try.
> -Bill
>

2951. Re: Curing static on panel meter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 19:29:08 UTC
From: "." <spam_not_@_for._me>
Message-ID: <3CB9D88F.404B31CE@_for._me>
Source record: 44793

And what does a degaussing coil have to do with STATIC electricity???

I wouldn't suggest to anybody to pass a meter by a degaussing coil and its strong MAGENTIC field....!!!!

Why not put a small bit of liquid dishwasher detergent on your fingertips and gently wash the face of the meter, followed by a dampened paper towel... It's always worked fine for me.

daves radio electronics wrote:

> try a degousing coil
>
> drc
>
> ".Bill :-)" <TheRealExray@netscape.net> wrote in message
> news:3CB82D2C.CF9CD885@netscape.net...
> > "Bob Lewis (AA4PB)" wrote:
> > >
> > > > Have a plastic meter that was shipped to me. It was on zero when
> > > shipped but
> > > > reads 1/3 scale after shipment due to static electricity from the
> > > plastic bag.
> > > > Know of any remedies?
> > > >
> > > I've had them do that while installed. Rubbing a slightly damp cloth
> > > across the front of the meter usually cures it (at least for a while).
> > >
> > I've heard of wiping them with one of those anti-static clothes dryer
> > sheets. Never done it myself, but worth a try.
> > -Bill
> >

2952. Re: S2001A TUBE, HELP YOUR DATES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 20:09:42 UTC
From: la8ak.xnd@online.no
Message-ID: <3cb966a4.142723850@news.online.no>
Source record: 44794
Cross-posted to: rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

On Sun, 14 Apr 2002 03:40:00 -0300, "Tito Tavella"
<lu6dbu@infovia.com.ar> wrote:

>Hi:
> I have not a data sheet the S2001A tube.
>
> Anyone maybe help?
> TKS
> TITO TAVELLA
> LU6DBU
>
>Claude Frantz <claude@pc0312a.rz.unibw-muenchen.de> escribi&#65533; en el mensaje
>de noticias 3CB40054.9449BED1@pc0312a.rz.unibw-muenchen.de...
>> J M Noeding wrote:
>>
>> > isn't it just a version of 6146B which Kenwood used...
>>
>> Do you have a data sheet of the S2001A ?
>
>
I don't really understand the point requiring the data, if it is
exactly like 6146B, you may look yourself at
http://frank.nostalgiaair.org/sheets6.html

I haven't had any of those Kenwood rigs using the device, but believe
it is just a question of different neutralization setting between
S2001A and 6146B. It might of course, give you higher price when
selling to dummies if you could show a data sheet.

73
LA8AK
--
remove ,xnd to reply

2953. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 20:13:49 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <ubjontm6p7lp0e@corp.supernews.com>
Source record: 44795

Would you like me to lay the question out in other terms?

Jim

"Bill & Suzie Whatley" <spud286@attbi.com> wrote in message
news:V94u8.27885$CH1.25272@sccrnsc02...

> I can not even understand your question at this point.

2954. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 21:50:19 UTC
From: Peter Voelpel <peter.voelpel@t-online.de>
Message-ID: <a9ctjojk02$1@news.t-online.com>
Source record: 44796
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Gary - KJ6Q schrieb in Nachricht ...
>Remember - that's what this thread is ABOUT - the rationale of converting from tubes in an amp that
>originally delivered 2KW or better output, to tubes only putting out 800-1200 watts (depending on
>whose test methods you prefer) - at a cost in excess of $400...

Well, above is NOT what this thread is ABOUT-
originally NI4L was looking for the original qst-article (title),
when you jumped in to declare that this conversion make no sense...

Again, there is no reason the russian tubes do less output then the 8875s, of course same mode used.
Anyhow there plate dissipation value is already bigger the 8875...
Under keydown condition (steady carrier) I do not have to worry about distortion at all, so this test would be fine to find out how much power is coming out of an original MLA2500 when measured with an oscilloscope into 50 ohm dummyload.
To make shure everything has settled, measurement should start after 1 minute
keydown.

As mentioned in previous mails I repaired and modified a couple of MLA2500s and also MLA1200s, so I am familiar with the Dentron power-supplies and the capability of the 8875 tubes.
I never saw more then 700 Watts from one 8875 !!

This thread is about conversion of the MLA2500 to tubes available at good prices.
Conversion will work fine with tubes like GU74b, Gi7b, 4CX800, 4CX400, TBL2/500 .
Limiting factor is the ht transformer and the pi-circuit components.

73 de Peter, DF3KV

2955. REPLACEING LEAFS ON A BANDSWITCH???????????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 22:11:25 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3CB9FE8D.19647509@charter.net>
Source record: 44697

I have a question.....
The only screws i could find that would fit in the holes were steel one
the hardware did not have any brass ones. Should i coat these with say
fingernail polish to keep
from arching? I feel the steel ones need something DO THEY???
thanks
chris NI4L

--

NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

2956. Mounting a 2 meter radio in exedition?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 22:20:24 UTC
From: Carl Walthall <n3qom@insightbb.com>
Message-ID: <Ignu8.23951$G72.16794@sccrnsc01>
Source record: 44698
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.swap

Hi All

I have a 1998 Ford Expedition that I would like to put a 2 meter radio in.
Can someone tell me the best position to mount the radio an antenna so that
I dont damage the SUV?

Thanks Carl

2957. Re: REPLACEING LEAFS ON A BANDSWITCH???????????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 22:53:40 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <3cba0581_2@newsa.ev1.net>
Source record: 44699

To keep them from rusting, thats about it, nail polish isn't going to
prevent arcing.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"NI4L" <ni4l@charter.net> wrote in message
news:3CB9FE8D.19647509@charter.net...
> I have a question.........
> The only screws i could find that would fit in the holes were steel one
> the hardware did not have any brass ones. Should i coat these with say
> fingernail polish to keep
> from arching? I feel the steel ones need something DO THEY???
> thanks
> chris NI4L
>
> --
>
> NI4L CUSTOM RESONANT DIPOLE
> LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
> Made with the same components used by our military forces today
> Custom made to YOUR FREQUENCY of operation
> Let me take the hassle out of making a RESONANT DIPOLE for you.
> Click here for more info... http://www.angelfire.com/nb/ni4l/
>
>

2958. Re: Mounting a 2 meter radio in exedition?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 23:08:26 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3CBA0B48.5C529602@tampabay.rr.com>
Source record: 44700
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.swap

carl
i dont know the lay out of the SUV but i would suggest mounting it where the
ashtray is unless you smoke then you can go with one of those radios that has
a removable face plate then mount the radio under the seat and the faceplate on
the dash somewhere
as for an antenna a 5/8 wave on a magmount on the roof would be good

Carl Walthall wrote:

> Hi All
>
> I have a 1998 Ford Expedition that I would like to put a 2 meter radio in.
> Can someone tell me the best position to mount the radio an antenna so that
> I dont damage the SUV?
>
> Thanks Carl

2959. Re: Mounting a 2 meter radio in exedition?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-14 23:16:19 UTC
From: Gary Glaenzer <nobulltrans@mchsi.com>
Message-ID: <75ou8.14340$HH5.1600@rwcrnsc51.ops.asp.att.net>
Source record: 44701
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.swap

radio:

where it is convenient and out of the way of ashes, spills, and water from
open windows

antenna:

dead center on the roof.............if you can't bear to put a 3/4" hole in
the roof, you don't really need a radio in the vehicle

"Carl Walthall" <n3qom@insightbb.com> wrote in message
news:Ignu8.23951$G72.16794@sccrnsc01...
> Hi All
>
> I have a 1998 Ford Expedition that I would like to put a 2 meter radio in.
> Can someone tell me the best position to mount the radio an antenna so
that
> I dont damage the SUV?
>
> Thanks Carl
>
>
>
>
>

2960. Re: Mounting a 2 meter radio in exedition?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 00:57:55 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ubk9dbp0f1b2fc@corp.supernews.com>
Source record: 44702
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.swap

One nice idea I saw with the Icom-207H (a dual-band rig) was to mount the head up by the mirror. They have a long cable available and the wire is easily hidden in the molding, plus the 207's head is quite small. There's a picture at http://www.qsl.net/w8kea. The guy who did it made a bracket so the molding screws could hold it in place.

..

"Carl Walthall" <n3qom@insightbb.com> wrote in message
news:Ignu8.23951$G72.16794@sccrnsc01...
> Hi All
>
> I have a 1998 Ford Expedition that I would like to put a 2 meter radio in.
> Can someone tell me the best position to mount the radio an antenna so
that
> I dont damage the SUV?
>
> Thanks Carl

2961. Re: Mounting a 2 meter radio in exedition?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 01:34:31 UTC
From: DBN <dnicholson@socket.net>
Message-ID: <ubkbg28n9qtr8c@corp.supernews.com>
Source record: 44703
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.swap

I agree....If you want to make the antenna work the best just drill the dang hole like a real man and live with it...Magmounts suck and they damage the paint. And glass mount antennas are even worse...

IMHO YMMV

Dan

2962. IRF510 schematic ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 01:58:54 UTC
From: milo17@aol.com
Message-ID: <20020414215854.02897.00005145@mb-ba.aol.com>
Source record: 44704

I am looking for a schematic for a HF amp for ssb use, 1-2 watts in for 10-20 watts out. I would like to use an IRF510 os similar device. Any Ideas or experiences ?? Thanks in advance - Mike, N2JVT

2963. Re: Effects of wide loop BW (was Re: Phase noise (was Re: Hybrid PLL...))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 02:01:54 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CBA34AB.3981@pop.removethistomailme.net>
Source record: 44705
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Richard Hosking wrote:
>
> John
> What happens if you use a crystal (or equivalent) reference for the loop at
> the two different frequencies?
> The DDS should be nearly as good as its crystal reference as far as random
> phase noise goes, with the main problem being coherent phase and amplitude
> spurs. However none of these appear on the plots you have shown. It should
> be possible to separate out the effect of the DDS/reference from the effect
> of the loop.
>
> Richard

The plots made at exactly 1 GHz don't show any DDS spurs, either with or without the crystal filter. It's not hard to find frequencies where spurs are still visible, though, as the spur-search zipfiles on the site show. You really wouldn't want to run a synthesizer like this without the narrowband DDS filter in place.

Some interesting plots with the wideband (23 kHz calculated BW) loop using different reference sources:

http://209.95.122.40/jm/uref.gif (50 kHz/division)
http://209.95.122.40/jm/wref.gif (10 khz/division)
http://209.95.122.40/jm/nref.gif (2 kHz/division)

The graph colors correspond to the following reference sources, each driving the LT1016 reference-buffer comparator at 21.407 MHz, -2 dBm:

Blue = AD9854 DDS clocked at 100 MHz with HP8662A synthesizer, fDDS = 21.407 MHz through 25 kHz 4-pole crystal filter and MAV-11 post-filter amplifier

Purple = HP8662A (high-quality synthesizer)

Green = HP8640B (free-running cavity oscillator with ECL divider chain)

Red = HP8656A (lower-end HP synthesizer)

Interestingly, the MAV-11 following the crystal filter contributes a noticeable amount of noise (a dB or so) to the wideband plot outside the filter's bandwidth. When I built this prototype, I should have put it between the DDS and the filter. (It's not used in the PCB version at all.)

-- jm

```
-----------------------------------------------------
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
-----------------------------------------------------
```

2964. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 03:25:47 UTC
From: Prefered Customer <jfriley@no.thanks.ieee.org>
Message-ID: <900F13B0947DA7EB.0090DC17AC3D97E0.509DADF8A6A84720@lp.airnews.net>
Source record: 44707

"r.crowley" <rcrowley7@xprt.net> wrote:
>Is this method used anywhere? With modern digital circuitry, it seems
>almost easier to do than traditional methods of amplitude modulation.
Aye, there's the rub. With a single exception, PWM in HF transmission results in traditional amplitude modulation (Heising, to be precise) where the PWM--or PDM--circuitry is used to take a higher DC voltage and convert it to a constant voltage (carrier) or a variable voltage (audio) with a DC (carrier) average value. The single exception was an RF Pulse Width system where the width of the RF pulse driving the RF amplifiers resulted in convention AM although at unacceptable conversion efficiencies at carrier.

PWM (as the term in used here) is simply an efficient way to get from AC (50 or 60 Hz) to DC to variable DC to RF. The first patent was in the 30's and uses a switching element in series with a supply to develop voltage for the anode. Two patents issued in the 60's, the first to Collins (Forrest Cummings) and the second to Gates (Hilmer Swanson). The Collins Patent put the RF tube anode at DC ground and applied a modulated voltage to the cathode. The Gates Patent applied the HV supply directly to the RF tube anode and placed the PWM modulator in the cathode return. In both cases, stored energy in the modulator was reduced and efficiency improved. Later, Harris (Ed Westenhaver/Hilmer Swanson) patented a method using four PWM modulators in parallel, each at a quadrant of a four-phase clock giving, in effect, a switching frequency four times higher than the clock. Later, Continental Electronics patented a method that let the clock frequency be determined by the amount of high-frequency audio information while reverting to the original concept. Subsequently ABB (later Thomcast and now Thales) and Continental Electronics both patented systems using step-pulse modulators that, rather than use switches in parallel, seriesed either 32 or 48 switches. This lowers the switching frequency of each switch to less than 2kHz while leaving the change frequency clock at 70 kHz.

None of these system are suitable for amateur use since, in practice, they result in an unwanted carrier and unwanted sideband being formed rather than the more (power and spectrum) efficient mode of single sideband transmission. In fact, all of the HF transmitters that now use PWM have EER (Envelope Elimination and Restoration) capability that allows single sideband to be transmitted at high efficiencies. SSB use on the HF bands is limited only by the primitive receivers used for general shortwave (HF) reception. A short tutorial on EER is at: http://rfwireless.rell.com/pdfs/AN_629_D.pdf

Almost every transmitter manufacturer, receiver manufacturer and international broadcaster is moving to adopt DRM (Digital Radio Mondiale), a system of digital transmission for HF use. This mode delivers high-fidelity stereo transmission in a limited spectrum space. Each element of the signal uses perceptual audio encoding (similar to MP3's) and retransmits the same information several times so that multipath and selective fading do not result in loss of signal lock/demodulation. Step-pulse (PWM) Modulators and EER are used to generate the digital signal efficiently as the peak to average power can exceed 10 dB (10:1 power ratio.) Frequency agile transmitters for HF service still use vacuum tube in (at least) the PA stage because of the difficulties in combining solid-state amplifiers over the required three octaves of frequency coverage. More information on DRM can be found at: http://www.drm.org/

Fred, W8OY
jfriley@ieee.nospam.org

2965. Who wants to build?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 03:27:18 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <YDru8.180$RO2.22866@news1.iquest.net>
Source record: 44706

Hey if you are wanting to build a nice and inexpensive HF CW transceiver, you really need to check in on the QRPp International group. They're just starting the Pixie II building class online. It's not too late to join in.

http://www.qrpp-i.com

Very educational series of building steps, great for the rookie builder, or the guy that has built a dozen rigs. Lot's of fun.

73

--

==========
KB9BVN/QRP - New Whiteland IN - EM69WN
QRP-ARCI #10223 QRP-L #1540 FIST #5695
FISTS CC #764 - Proud Member ARRL
HEATH HW-9 @ 2W or NORCAL 40A @ 1.3W
INTO INFAMOUS AF4PS ATTIC DIPOLE
SOC #400 AND FLYING PIGS QRP #-57
==========

2966. Re: Mounting a 2 meter radio in exedition?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 04:46:28 UTC
From: Carl Walthall <n3qom@insightbb.com>
Message-ID: <EWsu8.15019$4D6.936@rwcrnsc52.ops.asp.att.net>
Source record: 44708
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.swap

Should I be concern about the radio output blowing my SUV's computer??

"Carl Walthall" <n3qom@insightbb.com> wrote in message
news:Ignu8.23951$G72.16794@sccrnsc01...
> Hi All
>
> I have a 1998 Ford Expedition that I would like to put a 2 meter radio in.
> Can someone tell me the best position to mount the radio an antenna so
that
> I dont damage the SUV?
>
> Thanks Carl
>
>
>
>
>

2967. Infos about ICOM's old CI-IV Bus wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 08:35:49 UTC
From: wilfried philippi <wph@gmx.net>
Message-ID: <Xns91F16BCBECB65philippimadexcom@130.133.1.4>
Source record: 44709

Hello All,
i'm looking for Informations about the old Icom CI-IV Paralell Bus.
I have read the Thread of an old Posting from sm6pxj but the Infos are not what i want. The Reason is: I have an old Icom IC271H without UX14 and i want to Design a Replacement for the UX14 with an Atmel ATmega. So i'm looking for Informations about the Paralell Bus. Does anybody have a Descrition of the EX-309 Interface? (This was the old paralell Interface for this Rig) I need the following Infos:
How works the internal paralell Bus?
Why can i connect the Bus to a Microcontroller?
What Commands are used?
I hope i get Help here.
I use this because i will use this RIG as a Receiver for AO 40 operations as Receiver and want to controll it via my Computer.
Thanks.
73 de DB8FE
Wilfried

2968. Re: Mounting a 2 meter radio in exedition?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 09:20:59 UTC
From: NS9G <ns9g@insightbb.com>
Message-ID: <%Xwu8.41504$CH1.37621@sccrnsc02>
Source record: 44710
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.swap

"Carl Walthall" <n3qom@insightbb.com> wrote in message
news:EWsu8.15019$4D6.936@rwcrnsc52.ops.asp.att.net...
> Should I be concern about the radio output blowing my SUV's computer??

You should be more concerned about the top-heavy thing turning over.
--
73 de Bob NS9G

>
>
> "Carl Walthall" <n3qom@insightbb.com> wrote in message
> news:Ignu8.23951$G72.16794@sccrnsc01...
> > Hi All
> >
> > I have a 1998 Ford Expedition that I would like to put a 2 meter radio
in.
> > Can someone tell me the best position to mount the radio an antenna so
> that
> > I dont damage the SUV?
> >
> > Thanks Carl
> >
> >
> >
> >
> >
>
>

2969. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 09:41:56 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <sJaUOfTkBqu8Ew9C@fslife.co.uk>
Source record: 44711

Fred,

>>Is this method used anywhere? With modern digital circuitry, it seems
>>almost easier to do than traditional methods of amplitude modulation.
>Aye, there's the rub. With a single exception, PWM in HF transmission
>results in traditional amplitude modulation (Heising, to be precise)
>where the PWM--or PDM--circuitry is used to take a higher DC voltage
>and convert it to a constant voltage (carrier) or a variable voltage
>(audio) with a DC (carrier) average value. The single exception was
>an RF Pulse Width system where the width of the RF pulse driving the
>RF amplifiers resulted in convention AM although at unacceptable
>conversion efficiencies at carrier.
>
>PWM (as the term in used here) is simply an efficient way to get from
>AC (50 or 60 Hz) to DC to variable DC to RF. The first patent was in
>the 30's and uses a switching element in series with a supply to
>develop voltage for the anode. Two patents issued in the 60's, the
>first to Collins (Forrest Cummings) and the second to Gates (Hilmer
>Swanson). The Collins Patent put the RF tube anode at DC ground and
>applied a modulated voltage to the cathode. The Gates Patent applied
>the HV supply directly to the RF tube anode and placed the PWM
>modulator in the cathode return. In both cases, stored energy in the
>modulator was reduced and efficiency improved. Later, Harris (Ed
>Westenhaver/Hilmer Swanson) patented a method using four PWM
>modulators in parallel, each at a quadrant of a four-phase clock
>giving, in effect, a switching frequency four times higher than the
>clock. Later, Continental Electronics patented a method that let the
>clock frequency be determined by the amount of high-frequency audio
>information while reverting to the original concept. Subsequently ABB
>(later Thomcast and now Thales) and Continental Electronics both
>patented systems using step-pulse modulators that, rather than use
>switches in parallel, seriesed either 32 or 48 switches. This lowers
>the switching frequency of each switch to less than 2kHz while leaving
>the change frequency clock at 70 kHz.
>
>None of these system are suitable for amateur use since, in practice,
>they result in an unwanted carrier and unwanted sideband being formed
>rather than the more (power and spectrum) efficient mode of single
>sideband transmission. In fact, all of the HF transmitters that now
>use PWM have EER (Envelope Elimination and Restoration) capability
>that allows single sideband to be transmitted at high efficiencies.
>SSB use on the HF bands is limited only by the primitive receivers
>used for general shortwave (HF) reception. A short tutorial on EER is
>at: http://rfwireless.rell.com/pdfs/AN_629_D.pdf

>
>Almost every transmitter manufacturer, receiver manufacturer and
>international broadcaster is moving to adopt DRM (Digital Radio
>Mondiale), a system of digital transmission for HF use. This mode
>delivers high-fidelity stereo transmission in a limited spectrum
>space. Each element of the signal uses perceptual audio encoding
>(similar to MP3's) and retransmits the same information several times
>so that multipath and selective fading do not result in loss of signal
>lock/demodulation. Step-pulse (PWM) Modulators and EER are used to
>generate the digital signal efficiently as the peak to average power
>can exceed 10 dB (10:1 power ratio.) Frequency agile transmitters for
>HF service still use vacuum tube in (at least) the PA stage because of
>the difficulties in combining solid-state amplifiers over the required
>three octaves of frequency coverage. More information on DRM can be
>found at: http://www.drm.org/
A most interesting post.

I seem to remember reading among all my class-E reference material that
Raab or Sokal certainly wrote papers if not hold patents regarding EER.

Regards your final paragraph I think you will find at least one US based
HF broadcast transmitter manufacturer who does in fact use a solid state
PA.

http://www.omnitronix-inc.com/sw.htm

However coverage is limited to 3-6MHz!

I just remembered that both Continental and HCJB are also in there with
PLL 'all solid state' HF AM broadcast rigs.

I want one:-)

Regards
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

2970. Re: REPLACEING LEAFS ON A BANDSWITCH???????????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 11:57:17 UTC
From: Peter Voelpel <peter.voelpel@t-online.de>
Message-ID: <a9ef6v$8gp$02$1@news.t-online.com>
Source record: 44712

Never use steel near rf circuits !!
Steelscrews will get very hot and loose tension

73 de Peter, DF3KV

NI4L schrieb in Nachricht <3CB9FE8D.19647509@charter.net>...
>The only screws i could find that would fit in the holes were steel one
>the hardware did not have any brass ones.

2971. Re: Effects of wide loop BW (was Re: Phase noise (was Re: Hybrid PLL...))

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 12:50:55 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3cbacb02$0$22512@echo-01.iinet.net.au>
Source record: 44713
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Thanks for that John.
It is interesting that the 8640 (presumably running unlocked) gave the best results. The cavity oscillator should have the best phase noise of the various devices and I understand that dividers contribute relatively little noise. Thinking about the whole problem I think the critical figures for the reference would be its frequency and relative phase noise at that freq - the two could be combined to give a "figure of merit". Even if the comparison frequerncy is low (say only a few KHz) the reference phase noise is divided down and then multiplied up again. So the critical ratio is probably clock freq to output freq. Anyway that subject is probably done to death and we wont gain much more there!

Richard

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message news:3CBA34AB.3981@pop.removethistomailme.net...
> Richard Hosking wrote:
> >
> > John
> > What happens if you use a crystal (or equivalent) reference for the loop at
> > the two different frequencies?
> > The DDS should be nearly as good as its crystal reference as far as random
> > phase noise goes, with the main problem being coherent phase and amplitude
> > spurs. However none of these appear on the plots you have shown. It should
> > be possible to separate out the effect of the DDS/reference from the effect
> > of the loop.
> >
> > Richard
>
> The plots made at exactly 1 GHz don't show any DDS spurs, either with or
> without the crystal filter. It's not hard to find frequencies where
> spurs are still visible, though, as the spur-search zipfiles on the site
> show. You really wouldn't want to run a synthesizer like this without
> the narrowband DDS filter in place.
>
> Some interesting plots with the wideband (23 kHz calculated BW) loop
> using different reference sources:
>
> http://209.95.122.40/jm/uref.gif (50 kHz/division)

> http://209.95.122.40/jm/wref.gif (10 khz/division)
> http://209.95.122.40/jm/nref.gif (2 kHz/division)
>
> The graph colors correspond to the following reference sources, each
> driving the LT1016 reference-buffer comparator at 21.407 MHz, -2 dBm:
>
> Blue = AD9854 DDS clocked at 100 MHz with HP8662A synthesizer, fDDS =
> 21.407 MHz through 25 kHz 4-pole crystal filter and MAV-11 post-filter
> amplifier
>
> Purple = HP8662A (high-quality synthesizer)
>
> Green = HP8640B (free-running cavity oscillator with ECL divider chain)
>
> Red = HP8656A (lower-end HP synthesizer)
>
> Interestingly, the MAV-11 following the crystal filter contributes a
> noticeable amount of noise (a dB or so) to the wideband plot outside the
> filter's bandwidth. When I built this prototype, I should have put it
> between the DDS and the filter. (It's not used in the PCB version at
> all.)
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

2972. Re: 6:1 balun

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 13:00:32 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0204150500.4d5ceff7@posting.google.com>
Source record: 44714

Hi Jason,
I tried to build a DCTL antenna for 80 m from a 300 ohm TV twinlead,
hanging outside, the bottom was only several feet above ground. The
module of the input impedance (measured by Autek) was approx. 150 ohm
at resonance, increasing to both "sides of frequency".
A 1:3 balun should be fine - make a transformer with 1:1,7 turns
ratio.
Unfortunately, my TX is not QRV, so I have no on-band experience with
this antenna.

73 de Ivan OK1SIP

"Jason" <kc7eip_nospam@shaw.ca> wrote in message
news:<2bau8.29604$de1.1417569@news3.calgary.shaw.ca>...
> Well the antenna i am trying to mate up is a Distributed Capacitance Twisted
> Loop made out of 300 ohm tv
> antenna..http://marty.w.tripod.com/antennas.html.. Now i know there are
> several options other then this antenna that i could use.. Simple dipole or
> maby a verticle... both of which would be easier to design and match to the
> radio.. unfortunately i do not have the space to put up a dipole for 80 or
> 40 i could posibly put one up for 20 but license restrictions prevent that
> option... i have the room for a vert except i could not get the apropriate
> groundplane set up due to space requirements... and the loss due to ground
> loss would take up too much of my low power anyway.. so i am stuck with this
> antenna..hopefully it works... i would have hooked it up streight but do not
> wish to loose my transistors or something else in the radio due to swr
> problems.. :(

2973. Re: Curing static on panel meter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 13:06:43 UTC
From: "Eike Lantzsch, ZP6CGE" <eikelan@gmx.net>
Message-ID: <slrnablk33.lur.eikelan@ID-77364.user.dfncis.de>
Source record: 44650

daves radio electronics wrote:
> try a degousing coil
>
> drc
>
The poster is either very mean or completely ignorant.

Best regards, Ike

2974. Re: IRF510 schematic ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 13:09:24 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0204150509.66aaccd8@posting.google.com>
Source record: 44715

Hi Mike,
simple RF amplifiers with IRF610 were published e.g. by DJ9FG
(Funkamateur 12/1999, 1/2000) and PA0KSB (Electron 8/1998). Sorry, no
web resource found.

73 de Ivan OK1SIP

2975. Antenna material? Copper?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 13:11:40 UTC
From: bpitt@aol.com
Message-ID: <20020415091140.27712.00003698@mb-fs.aol.com>
Source record: 44716

About to get my first rig. I was licensed back in February and have been studying the 'build-it-yourself' websites'. My question is this, every example has used aluminum tubing for the beams, except the copper j-pole I saw. Can I not use copper instead of aluminum on the beams? Is it not as good? The reason is I have a LOT of copper tubing left over from some plumbing work I helped with. I just thought that maybe I could use it for my 2 meter beam instead of having to buy the aluminum stuff. Any thoughts? Thank you for your time.
KD5RJF

2976. Re: IRF510 schematic ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 13:36:08 UTC
From: Richard Heindel <rheindel@sprintmail.com>
Message-ID: <cHAu8.8954$3z3.874066@newsread1.prod.itd.earthlink.net>
Source record: 44717

Did a Google search on "irf510 hf amp" and got 26 hits, try this site...

http://www.qsl.net/kd0ar/hamradio/classe.html

Richard WB8KRN

2977. Re: Antenna material? Copper?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 13:45:00 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <c3Bu8.20503$tZ1.6089226@news2-win.server.ntlworld.com>
Source record: 44718

> Can I not use copper instead of aluminum on the beams? Is it not as good?
> The reason is I have a LOT of copper tubing left over from some plumbing
work I
> helped with. I just thought that maybe I could use it for my 2 meter beam
> instead of having to buy the aluminum stuff. Any thoughts? Thank you for
your
> time.
> KD5RJF
==========
Depending on the diameter of the copper tubing , if you intend using 1/4 to 3/8inch dia copper tubing it might not stiff enough and sag .This would not happen with alu tubing. Also copper tubing would require a protective coating,especially in an urban environment with the air contaminated with sulphur compounds.
Moreover copper is heavier.

Frank gm0csz.kn6wh@ntlworld.com

2978. Re: IRF510 schematic ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 13:59:33 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <d3Bu8.20504$tZ1.6088831@news2-win.server.ntlworld.com>
Source record: 44719

"OK1SIP" <remove_ok1sip@atlas.cz> wrote in message
news:5f5159fa.0204150509.66aaccd8@posting.google.com...
> Hi Mike,
> simple RF amplifiers with IRF610 were published e.g. by DJ9FG
> (Funkamateur 12/1999, 1/2000) and PA0KSB (Electron 8/1998). Sorry, no
> web resource found.
>
> 73 de Ivan OK1SIP
==========
Having the above referred Electron 8/1998 and most issues of SPRAT -G-QRP
Club , I'll be happy to assist by sending the relevant schematic diagrammes
on IRF510 & 610 as e-mail attachments.
Just ask.

Frank gm0csz.kn6wh@ntlworld.com

2979. Re: Mounting a 2 meter radio in exedition?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 14:10:59 UTC
From: Dave <dave#@#wilburn.hrcoxmail.com>
Message-ID: <TbBu8.32817$GG1.2292344@news2.east.cox.net>
Source record: 44720
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.swap

I don't deal with the sub-compacts much, I have an Excursion. ;^) Anyway, on the bottom of the dash is a small indentation. Just below the pocket in the dash to the right of the steering wheel. Brake controllers are often mounted there. I mounted my radio there and mounted the brake controller to another bracket connected to the radio bracket. I then use a 2m magmount that looks like a cell phone antenna. I can hit all the repeaters I need in about a 50 mile radius. The newer magmounts have a layer of mylar over the magnet, so it does not damage the vehicle. My has worked quite well, and I enjoy it quite a bit. Good luck.

--

Dave
KG4SSO

"Carl Walthall" <n3qom@insightbb.com> wrote in message
news:Ignu8.23951$G72.16794@sccrnsc01...
> Hi All
>
> I have a 1998 Ford Expedition that I would like to put a 2 meter radio in.
> Can someone tell me the best position to mount the radio an antenna so
that
> I dont damage the SUV?
>
> Thanks Carl
>
>
>
>
>

2980. Re: Antenna material? Copper?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 15:00:05 UTC
From: Josuha <jos@jos.net>
Message-ID: <ublrs0n8n67489@corp.supernews.com>
Source record: 44721

With copper, weight is probably the biggest factor to consider. Apart from that, as one post said you would want to coat the out side with something to protect the surface. I have a homebrew "super" J-pole and it works great. I just used spray paint on my j-pole to protect the surface and works fine (Take care to mask off where the adjusting contacts are at.). With a yagi for 2 meters and a small RS TV rotor no problem. I use a small rotor from RS for an aluminum 10 meter 3 element yagi and it's been there for years.
There is a design for a copper yagi using the "j-pole" design as the driven element. Interesting design.
If I recall it was 3 element design. The yagi-j-pole may be a neat design to experiment with. Good luck.

"Bpitt" <bpitt@aol.com> wrote in message
news:20020415091140.27712.00003698@mb-fs.aol.com...
> About to get my first rig. I was licensed back in February and have been
> studying the 'build-it-yourself' websites'. My question is this, every
example
> has used aluminum tubing for the beams, except the copper j-pole I saw.
Can I
> not use copper instead of aluminum on the beams? Is it not as good? The
> reason is I have a LOT of copper tubing left over from some plumbing work
I
> helped with. I just thought that maybe I could use it for my 2 meter beam
> instead of having to buy the aluminum stuff. Any thoughts? Thank you for
your
> time.
> KD5RJF

2981. Need Ham Radio Mag Article

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 15:23:53 UTC
From: D & B Rude <brewman@merr.com>
Message-ID: <dgCu8.2185$fH5.2412290@kent.svc.tds.net>
Source record: 44722

I am looking for a copy of an article which appeared in the November 1971 issue of Ham Radio Magazine. The article was about the Heathkit linear amp, I beleive, the SB220. Any help would be greatly appreciated. Snail mail adr is Dave Rude, POB 72, Oxford, WI, 53952. Thanks
KA9SRU

2982. Re: Antenna material? Copper?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 16:24:08 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <I8Du8.17449$4D6.873@rwcrnsc52.ops.asp.att.net>
Source record: 44723

Works fine. Better than Aluminum I suspect, although my 6 element 15 meter beam made out of brass tubing was a little heavy.

W4ZCB

2983. Re: IRF510 schematic ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 16:26:15 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <HaDu8.16852$V44.189@rwcrnsc53>
Source record: 44724

> simple RF amplifiers with IRF610 were published e.g. by DJ9FG
> (Funkamateur 12/1999, 1/2000) and PA0KSB (Electron 8/1998). Sorry, no
> web resource found.

Several more, a couple by DeMaw I think, appear in past issues of Pat Hawkers Tech Topics in Rad Com. They DO prefer 24 volts or more as opposed to running from 12 volts.

W4ZCB

2984. Re: Antenna material? Copper?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 16:38:44 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <ubm0hvkdgt1f9c@corp.supernews.com>
Source record: 44725

Copper has a lower resistance than aluminum and should work a little
better. It is not generally used for antennas because it is heavier,
cost more, and can have a corrosion problem if not treated with
something to protect it from the weather.

2985. Re: Antenna material? Copper?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 17:14:23 UTC
From: Robert Offer <robert@g1zjp.freeserve.co.uk>
Message-ID: <a9f1pq$759$1@newsg4.svr.pol.co.uk>
Source record: 44726

Agree with other comments on the NG - all good advice. My thought is to keep the copper tubing for building splitters/combiners when you have made more than one identical antenna and want to use them together to give you more gain / direction etc.
Have lots of fun building them all
Regards
Bob
G1ZJP
www.qsl.net/g1zjp

2986. Looking for Small Display Lamps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 19:17:20 UTC
From: jim@bay-tech.com
Message-ID: <3cbb272e.446814905@news.onvoy.net>
Source record: 44727
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

I've got a growing number of 2 meter rigs that need new lamps to illuminate the display and the keys. The lamps that the Azden rigs used are 8V and are 3mm dia x 6mm long. I've seen these lamps used in Alpine car radios also.

Does anyone know of a source for these small lamps?

Thanks in advance.

Jim

2987. Re: Looking for Small Display Lamps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 19:28:31 UTC
From: radiofun <radiofun@charter.net>
Message-ID: <ubmag8d73jrkee@corp.supernews.com>
Source record: 44728
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

A 12 volt lamp will work fine, but burn slightly dimmer...although they will
last longer! Radio Shack carries them.

--
radiofun@charter.net
Web Site: www.polkcounty.org/radiofun

"Jim" <jim@bay-tech.com> wrote in message
news:3cbb272e.446814905@news.onvoy.net...
> I've got a growing number of 2 meter rigs that need new lamps to
> illuminate the display and the keys. The lamps that the Azden rigs
> used are 8V and are 3mm dia x 6mm long. I've seen these lamps used in
> Alpine car radios also.
>
> Does anyone know of a source for these small lamps?
>
> Thanks in advance.
>
> Jim
>

2988. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 19:53:32 UTC
From: tongaloa <tongaloa@alltel.net>
Message-ID: <a9fb73$bk5$1@iac5.navix.net>
Source record: 44729
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

The way I read the data sheets on the GI7BT
that 650 hour life is running full tilt pulse at almost 3000 Mcps.
Pulse is 9 kV and 7 A for 63 kW peak input.
Efficiency is only 10% but that's still a 6 kW pulse out.
A cathode that can handle 7A pulses should last a long time
running 50% duty cycle and 550 mA....

I'm about 1/2 done with a single in a SB200 for 50 Mcps.
I'll be surprised if I don't see 600W RMS out for ICAS operation.

Gain is a bit more than 2 X that of the 572B so an HF SB200
conversion should give full output when driven with the newer
50W max output transceivers.

-t

2989. Re: Antenna material? Copper?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 20:02:06 UTC
From: Wayne Faris <wfaris@inebraska.com>
Message-ID: <3CBB31BD.D492C4F6@inebraska.com>
Source record: 44730

The idea of a yagi-j-pole sounds interesting. Got any references on it I can check out?

Wayne Faris, KEï¿½BZ

>
> There is a design for a copper yagi using the "j-pole" design as the
> driven element. Interesting design.
> If I recall it was 3 element design. The yagi-j-pole may be a neat design
> to experiment with. Good luck.
>

2990. Re: Antenna material? Copper?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 20:08:35 UTC
From: Josuha <jos@jos.net>
Message-ID: <ubmdu865dm1lf3@corp.supernews.com>
Source record: 44731

Hi Wayne..
Try this URL..also has a downloadable file for the diagram. The designer calls it a "Jagi". Looks to be a "plumbers delight".
Let me know if you build it and how it perfroms. Very interesting design IMHO...Jim

http://www.redden.on.ca/~tcarc/2mjagi.htm

"Wayne Faris" <wfaris@inebraska.com> wrote in message news:3CBB31BD.D492C4F6@inebraska.com...
>
> The idea of a yagi-j-pole sounds interesting. Got any references on it I can
> check out?
>
> Wayne Faris, KE<illegible>BZ
>
> >
> > There is a design for a copper yagi using the "j-pole" design as the
> > driven element. Interesting design.
> > If I recall it was 3 element design. The yagi-j-pole may be a neat design
> > to experiment with. Good luck.
> >
>

2991. Re: Antenna material? Copper?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 21:05:03 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CBB407F.1EE874A@eznec.com>
Source record: 44732

There's no way you'd be able to notice any improvement due to the
resistivity difference. The only significant difference is mechanical.

Roy Lewallen, W7EL

"Bob Lewis (AA4PB)" wrote:
>
> Copper has a lower resistance than aluminum and should work a little
> better. It is not generally used for antennas because it is heavier,
> cost more, and can have a corrosion problem if not treated with
> something to protect it from the weather.

2992. Re: Looking for Small Display Lamps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 21:42:18 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <VRHu8.20952$sL6.3627769@news11-gui.server.ntli.net>
Source record: 44733
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

> I've got a growing number of 2 meter rigs that need new lamps to
> illuminate the display and the keys. The lamps that the Azden rigs
> used are 8V and are 3mm dia x 6mm long. I've seen these lamps used in
> Alpine car radios also.
>
> Does anyone know of a source for these small lamps?
=========
Suggest you replace these lamps with a LED + suitable dropping resistor.
That will solve the bulb problems (probably) forever.
Good Luck.

Frank gm0csz.kn6wh@ntlworld.com

2993. Help Me Find This Homebrew Article -

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 22:54:58 UTC
From: donrm@soco.agilent.com
Message-ID: <1018911298.158587@cswreg.cos.agilent.com>
Source record: 44734

I posted this 4-13-00 with no answer; perhaps someone
may have come across the article by this time...

I'm still looking for help steering me to an article I saw
for a solid state synchroscope as used for synchronizing
two alternators - only instead of the usual two lite
bulbs, this one utilized a crystal oscillator comparing
60 Hz emergency alternator power and displaying it on
LEDs arranged in a circle that rotated with phase dif-
ference.

The original article was for synchronizing a field day
alternator to a 60 Hz crystal controlled timebase.

I've searched the yearly index for Ham Radio and Com-
munications Quarterly in addition to keyword search
on the ARRL member site. Not recalling the name of
the article complicates things considerably. Perhaps
I saw it in Wireless World.

Anyone come across it and remember where I saw it?

TIA and 73
Don K6LTS
donrm@soco.agilent.com

2994. Re: Antenna material? Copper?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-15 23:16:22 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <3cbb8222$1_1@newsa.ev1.net>
Source record: 44741

Structurally not strong enough, and weighs allot more than aluminum. It
would bend out of shape in no time at all.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Bpitt" <bpitt@aol.com> wrote in message
news:20020415091140.27712.00003698@mb-fs.aol.com...
> About to get my first rig. I was licensed back in February and have been
> studying the 'build-it-yourself' websites'. My question is this, every
example
> has used aluminum tubing for the beams, except the copper j-pole I saw.
Can I
> not use copper instead of aluminum on the beams? Is it not as good? The
> reason is I have a LOT of copper tubing left over from some plumbing work
I
> helped with. I just thought that maybe I could use it for my 2 meter beam
> instead of having to buy the aluminum stuff. Any thoughts? Thank you for
your
> time.
> KD5RJF

2995. FS: 1200V @ 1.5A DIODES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 00:46:35 UTC
From: Joe Hargis <joehargis@worldnet.att.net>
Message-ID: <LvKu8.26408$Rw2.2104114@bgtnsc05-news.ops.worldnet.att.net>
Source record: 44735

Have new 1200v @1.5A diodes for just 10 cents each + postage.
joehargis@worldnet.att.net

WS0E

2996. IRF510 vs IRF520 (was: IRF510 schematic ?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 00:57:28 UTC
From: kalmichael@yahoo.com.au
Message-ID: <b6ae557e.0204151657.5d31d4aa@posting.google.com>
Source record: 44736

I've have a couple of interesting projects that call for IRF510s,
including the wideband HF amplifiers mentioned here. I have easy
access to some IRF520s: could these be substituted for the 510s?

I have the data sheets, and the devices seem pretty much the same
except that the 520 can handle twice the drain current and has a lower
switch-on resistance. Does this mean that they are simply a higher
power version of the 510, and would plug straight in in the their
place?

Still learning, assistance appreciated.
Michael.

–
Kalgoorlie, Western Australia.
Home of Lots of Red Dust.

2997. Re: MLA2500 capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 01:01:16 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <wJKu8.20290$HH5.2105@rwcrnsc51.ops.asp.att.net>
Source record: 44737

http://www.harbachelectronics.com/

Look under caps ... mentions the Dentron specifically

CP-140 SET OF 6 MATCHED 140mF 450VDC COMPUTER GRADE CAPACITORS W/ MOUNTING SCREWS The CP-140 is a matched set of 6 140mF 450VDC computer grade capacitors by Cornell-Dubilier. Also included are the mounting screws with lock washers. These are perfect for HV power supplies and amp builders. They can also be used to replace bad caps in Dentron and other amplifiers. Capacitor size is 3-3/8" x 1-3/8". The cost for the set is $48, USA & Canada shipping included. Sales tax for Indiana residents is $2.40.

"James Skalski" <jskalski@bellatlantic.net> wrote in message news:3CB1A306.5080501@bellatlantic.net...
> I am looking for a MLA2500 parts radio. No power supply needed.
> Just the caps and bandswitch need to be intact for use.
> --
> 73,
>
> Jim n2go
>

2998. Re: Looking for Small Display Lamps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 01:04:40 UTC
From: Andy La Varre <alavarre@amail.lavarre.nntp.org>
Message-ID: <ubo7emkf674cc@corp.supernews.com>
Source record: 44652
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

You might try

www.lightingguru.com

Email: gus@lightingguru.com

I've used their branch in NE Fort Lauderdale, FL:

LIGHT BULBSUNLIMITED
IF WE AIN'T GOT IT, WE'LL GET IT!
WHOLESALE * RETAIL * EXPORT
"For All Your Lighting Needs"
FT. LAUDERDALE
872 E Oakland Park Blvd *
Ft. Lauderdale, FL 33334
954.563.6667

They found me some arcane 240 VAC bulbs as well as some equally arcane 28 VDC ones for the helm console... Also promised to dig up some 240VAC rope lighting...

Recommended.

Cheers, Andy

"Jim" <jim@bay-tech.com> wrote in message
news:3cbb272e.446814905@news.onvoy.net...
> I've got a growing number of 2 meter rigs that need new lamps to
> illuminate the display and the keys. The lamps that the Azden rigs
> used are 8V and are 3mm dia x 6mm long. I've seen these lamps used in
> Alpine car radios also.
>
> Does anyone know of a source for these small lamps?
>
> Thanks in advance.
>
> Jim
>

2999. Re: Antenna material? Copper?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 01:06:44 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <ubmuahsf5g482a@corp.supernews.com>
Source record: 44738

> There's no way you'd be able to notice any improvement due to the
> resistivity difference. The only significant difference is
mechanical.
>
> Roy Lewallen, W7EL
>
Agreed. I didn't mean to imply that the difference would be
significant or even measurable.

3000. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 01:42:28 UTC
From: Prefered Customer <jfriley@no.thanks.ieee.org>
Message-ID: <79006B72D3D24195.C7137958039E0337.2EA5B0B299202F9C@lp.airnews.net>
Source record: 44739

Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk> wrote:
>I think you will find at least one US based
>HF broadcast transmitter manufacturer who does in fact use a solid state
>PA.
>However coverage is limited to 3-6MHz!
It's not frequency agile; I did mention the three-octave range.

Fred, W8OY
jfriley@ieee.nospam.org

3001. Re: Mounting a 2 meter radio in exedition?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 01:50:57 UTC
From: dnb <dnb@comcastt.com>
Message-ID: <5sLu8.533$XV5.79008@bin4.nnrp.aus1.giganews.com>
Source record: 44740
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.swap

Comet and Diamond Antenna make mounts that attach nicely to the side lip of the hatch door. I've got two mounted near the top, on either side, and they work nicely. This area is black trim on my '97 so there is no paint to mar. Also, this mounting location is fine when you open the hatch, because the antenna lays out horizontally along the roof line, a bit outboard so it clears the roof.

3002. Re: Looking for Small Display Lamps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 02:00:11 UTC
From: Mark Hall <vze2mhvc@bellatlantic.net>
Message-ID: <3CBB8468.D24CE500@bellatlantic.net>
Source record: 44742
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Careful.. seen several rigs with melted lamp holders due to lamps getting too hot. Try the replacement.. if it gets HOTT.. then put a resistor in series. Melted Lamp holders can make a mess of the front panel..

'73 KI4Z

Jim wrote:

> I've got a growing number of 2 meter rigs that need new lamps to
> illuminate the display and the keys. The lamps that the Azden rigs
> used are 8V and are 3mm dia x 6mm long. I've seen these lamps used in
> Alpine car radios also.
>
> Does anyone know of a source for these small lamps?
>
> Thanks in advance.
>
> Jim

3003. Re: IRF510 vs IRF520 (was: IRF510 schematic ?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 02:21:22 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CBB8AA2.57CFB5CF@eznec.com>
Source record: 44743

Nope. You didn't look quite far enough down on the data sheets. The killer spec for these devices is the capacitance, which is very high and, like any diode reverse capacitance, nonlinear. The tricky part of designing a rig using a VMOS device is dealing with this. The 520 is basically two 510 chips wired in parallel. This gives you twice the current handling capability, half the on resistance, and. . . there ain't no free lunch. . . twice the capacitance. In general, a project designed for a 510 can't use a 520, and usually can't easily be redesigned to handle one.

Roy Lewallen, W7EL

Michael wrote:
>
> I've have a couple of interesting projects that call for IRF510s,
> including the wideband HF amplifiers mentioned here. I have easy
> access to some IRF520s: could these be substituted for the 510s?
>
> I have the data sheets, and the devices seem pretty much the same
> except that the 520 can handle twice the drain current and has a lower
> switch-on resistance. Does this mean that they are simply a higher
> power version of the 510, and would plug straight in in the their
> place?
>
> Still learning, assistance appreciated.
> Michael.
> _
> Kalgoorlie, Western Australia.
> Home of Lots of Red Dust.

3004. Re: Mounting a 2 meter radio in exedition?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 02:51:37 UTC
From: Mark Walsh <mark@km6xu.die.spam.die.com>
Message-ID: <a9g3hh$6bi$1@bob.news.rcn.net>
Source record: 44744
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.swap

"Carl Walthall" <n3qom@insightbb.com> wrote:

> Should I be concern about the radio output blowing my SUV's computer??

Ew, that sounds like the makings of an old Gary Larson cartoon...

3005. Re: IRF510 schematic ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 05:24:09 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <NzOu8.2665$6w7.307483692@news.inreach.com>
Source record: 44745

Mike:

The ARRL Radio Amateur's Handbook has a 160-10 linear amp using a pair of IRF-510's. I have the 2001 edition and it probably appears in others as well. With a 28 V power supply, 1 watt in gives 40 watts out (at least, but higher on some frequencies).

Roger K6XQ

3006. Re: Wanted Led Backlight

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 05:37:36 UTC
From: Marc <marc_k@NoSpamreva.sixgirls.org>
Message-ID: <ubne503bl7844@corp.supernews.com>
Source record: 44746
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

In rec.radio.amateur.homebrew James Skalski <jskalski@bellatlantic.net> wrote:
> I am looking for some LED backlight wafers approximately 1" x 6"
> These were used in some of the ten tec transceiver displays.
> Anyone have these or know of a source for them?
> -- I would like to have some spares for the Argonaut II and Delta II
> transceivers.
> 73,

> Jim n2go

Just a note-if these backlights are actually "wafers", then they are almost certainly NOT LED devices, but EL(ElectroLumenesent)-the spelling is a bit "off", but you can figure out what I mean.
These have VERY different characteristics than an LED device.
High voltage, at VERY low current is used for EL panels.

Please remove NoSpam to reply

3007. Comtech ATV modules

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 06:09:17 UTC
From: "J.F. FOURCADIER" <jf.fourcadierNO@SPAMwanadoo.fr>
Message-ID: <a9gf1hjee2@wanadoo.fr>
Source record: 44647

The pre-emphasis of the Comtech modules:

http://perso.wanadoo.fr/jf.fourcadier/index_e.htm

--

73 et B5+ de Jean-Fran&#65533;ois FOURCADIER F4DAY

3008. FE Rubidium oscillator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 06:41:35 UTC
From: "Dr. P. Seifert" <p.seifert@profile-optsys.com>
Message-ID: <a9gh31$2u0p$1@news.space.net>
Source record: 44648

Hi,

bougth a rubidium oscillator via EBAY. As I saw, some more of these
devices were sold there, mainly to hams.
I'm looking now for the connection scheme and possibly some more
technical data.
Has anybody some info for me?

Oscillator: FE 5650A with option 58 from Frequency Electronics.

73'
Pedro
DF3YB

3009. Re: Help Me Find This Homebrew Article -

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 08:37:00 UTC
From: Adri <tncdrn@tin.it>
Message-ID: <FoRu8.4844$g04.14451@tornado.fastwebnet.it>
Source record: 44649

Don
here you find a W+W searcheble database. Hope it helps
http://www.softcopy.co.uk/electronics%20world%20index.htm
Adriano

<donrm@soco.agilent.com> ha scritto nel messaggio
news:1018911298.158587@cswreg.cos.agilent.com...
> I posted this 4-13-00 with no answer; perhaps someone
> may have come across the article by this time...
>
> I'm still looking for help steering me to an article I saw
> for a solid state synchroscope as used for synchronizing
> two alternators - only instead of the usual two lite
> bulbs, this one utilized a crystal oscillator comparing
> 60 Hz emergency alternator power and displaying it on
> LEDs arranged in a circle that rotated with phase dif-
> ference.
>
> The original article was for synchronizing a field day
> alternator to a 60 Hz crystal controlled timebase.
>
> I've searched the yearly index for Ham Radio and Com-
> munications Quarterly in addition to keyword search
> on the ARRL member site. Not recalling the name of
> the article complicates things considerably. Perhaps
> I saw it in Wireless World.
>
> Anyone come across it and remember where I saw it?
>
> TIA and 73
> Don K6LTS
> donrm@soco.agilent.com

3010. Re: Antenna material? Copper?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 12:10:23 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <PwUu8.40383$G72.33990@sccrnsc01>
Source record: 44651

"M.E." <bogus@nospam.com> wrote in message
news:3cbb8222$1_1@newsa.ev1.net...
> Structurally not strong enough, and weighs allot more than aluminum. It
> would bend out of shape in no time at all.
>
Not so at all. In the 50's I built a channel 2 three element TV yagi
(plumbers delight) and had it up for 7 years. HD copper is pretty tough
stuff. I wouldn't have any trepidations in using it at least down thru 6
meters, but it isn't going to be light.

W4ZCB

3011. Re: Mounting a 2 meter radio in exedition?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 12:52:40 UTC
From: Gary Glaenzer <nobulltrans@mchsi.com>
Message-ID: <s8Vu8.53484$CH1.48753@sccrnsc02>
Source record: 44653
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.swap

"Mark Walsh" <mark@km6xu.die.spam.die.com> wrote in message
news:a9g3hh$6bi$1@bob.news.rcn.net...
> "Carl Walthall" <n3qom@insightbb.com> wrote:
>
> > Should I be concern about the radio output blowing my SUV's computer??
>
> Ew, that sounds like the makings of an old Gary Larson cartoon...
>

back in the early 80's, we were putting radios in new LTD squad cars

the city insisted on having the antennas mounted ON the light
bars.............well, there was about 3 extra feet of light bar cable left
over, so the install guy made a loop around the 'computer' (actually, the
ignition module) on the left inner fender

all was well until a car was going balls-to-the-wall to an accident one day,
the driver hit the button on the mike, and the ignition died, just like
you'd turned the key off

only on one channel of the radio, and only at wide-open throttle

but boy, did we have fun 'diagnosing' the trouble.....we must have
used 5 tanks of gas 'trying to duplicate the problem'.....

3012. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 13:32:51 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <4VSRJJADgCv8EwWp@fslife.co.uk>
Source record: 44658

Fred,

>>I think you will find at least one US based
>>HF broadcast transmitter manufacturer who does in fact use a solid state
>>PA.
>>However coverage is limited to 3-6MHz!
>It's not frequency agile; I did mention the three-octave range.
I noted you mentioned the three-octave range.

Shows you how dumb I am.

I thought 'frequency agile' meant PLL tuned rather than rock-bound if
only in this case coverage is rather narrow.

I better get back to selling Dinky Toy transmitters.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3013. Which of these loband are best for me?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 13:35:08 UTC
From: cordoba@wolf-web.com
Message-ID: <63d3d1c.0204160535.dd23a90@posting.google.com>
Source record: 44654
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

A friend has some radios for sale. Which of these is easiest to convert to other VHF-lo frequencies or possibly up to 6m? By easiest I mean it can be changed by dip switch/computer reprogramming/PROM swap but if not, whichever one has the most available parts and is easiest to convert with a minimum of retuning. I am assuming the two tube units would be the most difficult to work with. Are either of the Motorolas reprogrammable with a new prom or computer upload?

If you know anything about these radios please let me know as all I have are model numbers. They are all set up for at least two channels on 46 Mhz.

RCA MBA19MAII 2 chan mobile $150
GE Master-II Model LB1-44506 2 chan 100W mobile $150 w/manual
Motorola Mitrex 75V 4 chan w/ remote head and manual $225
Motorola Twin V model T61GJD-3A-PH50 2 chan 100 W mobile runs off of 6/12V $50
Comco 580-HA 2 chan tube base &extra parts $50
Comco 2 chan tube mobile $25

Thank you!!

3014. Re: MLA2500 capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 13:39:42 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3CBC299E.14457B5E@charter.net>
Source record: 44655

http://hoffind.com/
look under caps he has some.

w9gb wrote:

> http://www.harbachelectronics.com/
>
> Look under caps ... mentions the Dentron specifically
>
> CP-140 SET OF 6 MATCHED 140mF 450VDC COMPUTER GRADE CAPACITORS W/ MOUNTING
> SCREWS The CP-140 is a matched set of 6 140mF 450VDC computer grade
> capacitors by Cornell-Dubilier. Also included are the mounting screws with
> lock washers. These are perfect for HV power supplies and amp builders.
> They can also be used to replace bad caps in Dentron and other amplifiers.
> Capacitor size is 3-3/8" x 1-3/8". The cost for the set is $48, USA &
> Canada shipping included. Sales tax for Indiana residents is $2.40.
>
> "James Skalski" <jskalski@bellatlantic.net> wrote in message
> news:3CB1A306.5080501@bellatlantic.net...
> > I am looking for a MLA2500 parts radio. No power supply needed.
> > Just the caps and bandswitch need to be intact for use.
> > --
> > 73,
> >
> > Jim n2go
> >

--

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Click here for more info... http://www.angelfire.com/nb/ni4l/

3015. Re: FE Rubidium oscillator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 14:25:22 UTC
From: gc@radix.net
Message-ID: <a9hc8iofh1@news1.Radix.Net>
Source record: 44656
Body handling: HTML body converted to readable text

In article ,
Dr. P. Seifert wrote:
>Hi,
>
>bougth a rubidium oscillator via EBAY. As I saw, some more of these
>devices were sold there, mainly to hams.
>I'm looking now for the connection scheme and possibly some more
>technical data.
>Has anybody some info for me?
>
>Oscillator: FE 5650A with option 58 from Frequency Electronics.

Frequency Electronics has some info for you. The first place to check
for this kind of information is the manufacturer's web site.
If you go to their web site you'll find a 12 page PDF brochure that
includes technical specifications and pin outs for the connector.
It also lists options, but option 58 is not among them.

The brochure includes basic description of rubidium frequency
standards and would be of use to anyone that would like to learn
a little about them.

3016. Re: Which of these loband are best for me?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 14:43:31 UTC
From: gc@radix.net
Message-ID: <a9hdajofh2@news1.Radix.Net>
Source record: 44657
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

In article <63d3d1c.0204160535.dd23a90@posting.google.com>,
Cordoba <cordoba@wolf-web.com> wrote:
>A friend has some radios for sale. Which of these is easiest to
>convert to other VHF-lo frequencies or possibly up to 6m? By easiest
>I mean it can be changed by dip switch/computer reprogramming/PROM
>swap but if not, whichever one has the most available parts and is
>easiest to convert with a minimum of retuning. I am assuming the two
>tube units would be the most difficult to work with. Are either of
>the Motorolas reprogrammable with a new prom or computer upload?
>
>If you know anything about these radios please let me know as all I
>have are model numbers. They are all set up for at least two channels
>on 46 Mhz.
>
>RCA MBA19MAII 2 chan mobile $150
>GE Master-II Model LB1-44506 2 chan 100W mobile $150 w/manual
>Motorola Mitrex 75V 4 chan w/ remote head and manual $225
>Motorola Twin V model T61GJD-3A-PH50 2 chan 100 W mobile runs off of
>6/12V $50
>Comco 580-HA 2 chan tube base &extra parts $50
>Comco 2 chan tube mobile $25
>

These are all crystal controlled radios (I am not familiar with the
RCA, but most likely it is the same vintage). That is, to set them to
a new channel frequency requires installing new crystals (a pair, one
for receive and one for transmit) for each channel. After installing
the crystals it will be necessary to retune the radio. This will require
a signal generator, 50 ua meter, RF power meter and some tuning tools.
It is also a good idea to have the manual with tuning instructions.

The Mitrek should be fairly easy to convert to 6M. The tube models
will probably require some modification, i.e., changing some tuning
capacitors.

BTW, some of the prices look kind of high.

3017. Re: Castro used a BC348?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 16:57:43 UTC
From: Tom Sedlack <cts050@email.mot.com>
Message-ID: <a9hkpafot1@localhost.localdomain>
Source record: 44659

"Philip de Cadenet" <Philstheboss@thebbc.fslife.co.uk> wrote in message
news:Ou4snTBsAJu8Ewqe@fslife.co.uk...
> Hey,
>
> >Did the CIA have an exploding valve for it? ;0)
>
> Don't knock the guy.
>
> He's still in charge nearly fifty years on, has a world renowned medical
> system and makes fine cigars.
>
> More than what can be said of Clinton:-)
>
> --
> Philip de Cadenet G4ZOW
> Transmitters 'R' Us
> http://www.transmittersrus.com

Whadda ya mean? Clinton makes "fine" cigars.....

3018. Piezo Xtal Oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 17:40:53 UTC
From: Tony Angerame <tangeram@lucent.com>
Message-ID: <a9hndq$10k@nntpb.cb.lucent.com>
Source record: 44660

I recently picked up a grab bag of these things at a flea market. Many frequencies i.e. 10, 20, 13, 50, 30 mhz.. Some big and some small. Is there any real value to these? Is it worth my time to put them on Ebay?

Thanks,

Tony WA6LZH

3019. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 20:27:18 UTC
From: Duncan Clark <NEWS@[127.0.0.1]>
Message-ID: <YrmkMqDmkIv8Eww+@ntlworld.com>
Source record: 44661
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

In message <Py5u8.8957$8W5.7522@nwrddc02.gnilink.net>, Gary - KJ6Q
<davison7@gte.net> writes
>so *I* would take the higher powered option ANY time!

But what you are talking about is low power :-)

http://i5uxj-2.cln.it/amp/hfamp.html

or for QRP

http://www.pollak.sulinet.hu/elektro/pa_rev/pa_rev.htm

Duncan
G4ELJ
--
Support bacteria. They are the only culture some people have.

Duncan Clark

3020. Re: Antenna material? Copper?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 21:28:01 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3cbc95ea.257113@news.freeserve.net>
Source record: 44662

On Tue, 16 Apr 2002 12:10:23 GMT, "Harold E. Johnson"
<W4ZCB@mchsi.com> wrote:

>
>"M.E." <bogus@nospam.com> wrote in message
>news:3cbb8222$1_1@newsa.ev1.net...
>> Structurally not strong enough, and weighs allot more than aluminum. It
>> would bend out of shape in no time at all.
>>
>Not so at all. In the 50's I built a channel 2 three element TV yagi
>(plumbers delight) and had it up for 7 years. HD copper is pretty tough
>stuff. I wouldn't have any trepidations in using it at least down thru 6
>meters, but it isn't going to be light.
>
Not sure about US copper, but in UK copper fittings and pipe work fine
for most frequencies where you would use tube. We have a "Z" grade
which is hard drawn and very thin walled, not sure of the weight (
versus ali) but usable down to 10m with "soldered endfed" connectors.
the "microbore" 8mm Z grade is excellent for 2m.

3021. Re: Mounting a 2 meter radio in exedition?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 22:13:14 UTC
From: Bill Hall <bhallc21@flash.net>
Message-ID: <3CBCA1C0.BA6123E4@flash.net>
Source record: 44663
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.swap

Carl:
You might consider something innovative as I had to do on a lease vehicle. I have a 99 Explorer (Limited) and there is NO spare space , so I made up two inverted "J"
brackets; bolted them to the mobile mount bracket, mounted the bracket to the bottom of the radio and hung it from the center console(open the console, hang it on and close the cover). No holes to drill, easily reachable/readable and when I leave the vehicle for an extended period, I open the console; raise the radio up and slide it under the seat. Works for me! If you're interested, e-mail me direct and I'll tell you about the "no holes visible" roof mount I made! G.I. ingenuity!

Bill kd5reg

Carl Walthall wrote:

> Hi All
>
> I have a 1998 Ford Expedition that I would like to put a 2 meter radio in.
> Can someone tell me the best position to mount the radio an antenna so that
> I dont damage the SUV?
>
> Thanks Carl

3022. WTB Unbuilt TT13xx kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 22:24:41 UTC
From: Paul <paul.warman@usa.net>
Message-ID: <3cbca485_2@mk-nntp-1.news.uk.worldonline.com>
Source record: 44664

Does anyone have an unbuilt Ten Tec 13xx kit they want to sell. Please
contact paul.warman@usa.net
Thanks
Paul, G0odp

3023. Crystal tester help please

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 23:19:19 UTC
From: wa0goz@arrl.net
Message-ID: <3CBCB177.14B8@arrl.net>
Source record: 44665

A number of years ago, I built a crystal or crystal filter tester. I just ran across it, not having used it for some time. It was a grounded base input and output transistor with the crystal or filter inserted in between. Does anyone remember such a beast and where I got it from. I might like to use it again, but can't remember what it was all about. (Senior Moment). Thanks and 73

Henry WA0GOZ

3024. Re: Antenna material? Copper?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 23:37:24 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <3cbcb4fc_1@newsa.ev1.net>
Source record: 44666

Oh, I thought we were talking about "real" antennas for HF, my bad. I shall now bow out of this discussion.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Harold E. Johnson" <W4ZCB@mchsi.com> wrote in message
news:PwUu8.40383$G72.33990@sccrnsc01...
>
> "M.E." <bogus@nospam.com> wrote in message
> news:3cbb8222$1_1@newsa.ev1.net...
> > Structurally not strong enough, and weighs allot more than aluminum. It
> > would bend out of shape in no time at all.
> >
> Not so at all. In the 50's I built a channel 2 three element TV yagi
> (plumbers delight) and had it up for 7 years. HD copper is pretty tough
> stuff. I wouldn't have any trepidations in using it at least down thru 6
> meters, but it isn't going to be light.
>
> W4ZCB
>
>

3025. Re: Need Ham Radio Mag Article

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-16 23:43:34 UTC
From: Skipp <skipp@pilotNOSPAMPLEASE.ucdavis.edu>
Message-ID: <a9icv6$f3a$1@woodrow.ucdavis.edu>
Source record: 44667

Hi Dave,

The real information about circuit updates and mods for the SB-220 are
detailed on Rich Measures web page. http://www.vcnet.com/~measures

Replacement parts are available from various suppliers mentioned and
complete power supply cap banks can be purchased from www.harbach.com

better to start off on the right foot.

cheers
skipp
http://sonic.ucdavis.edu

: D & B Rude <brewman@merr.com> wrote:
: I am looking for a copy of an article which appeared in the November 1971
: issue of Ham Radio Magazine. The article was about the Heathkit linear amp,
: I beleive, the SB220. Any help would be greatly appreciated. Snail mail adr
: is Dave Rude, POB 72, Oxford, WI, 53952. Thanks
: KA9SRU

3026. Re: Help Me Find This Homebrew Article -

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-17 00:49:50 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <ubphlifctbpp17@corp.supernews.com>
Source record: 44668

I'd be interested in the cct if you find it, sounds neat!
tnx
hank wd5jfr
<donrm@soco.agilent.com> wrote in message
news:1018911298.158587@cswreg.cos.agilent.com...
> I posted this 4-13-00 with no answer; perhaps someone
> may have come across the article by this time...
>
> I'm still looking for help steering me to an article I saw
> for a solid state synchroscope as used for synchronizing
> two alternators - only instead of the usual two lite
> bulbs, this one utilized a crystal oscillator comparing
> 60 Hz emergency alternator power and displaying it on
> LEDs arranged in a circle that rotated with phase dif-
> ference.
>
> The original article was for synchronizing a field day
> alternator to a 60 Hz crystal controlled timebase.
>
> I've searched the yearly index for Ham Radio and Com-
> munications Quarterly in addition to keyword search
> on the ARRL member site. Not recalling the name of
> the article complicates things considerably. Perhaps
> I saw it in Wireless World.
>
> Anyone come across it and remember where I saw it?
>
> TIA and 73
> Don K6LTS
> donrm@soco.agilent.com

3027. Re: Antenna material? Copper?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-17 02:22:39 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <hT4v8.263$RO2.39653@news1.iquest.net>
Source record: 44669

Hell for a 2m beam copper would be fine and dandy.

Copper, especially FREE copper, is wonderful stuff. It does oxidize pretty quickly.

"M.E." <bogus@nospam.com> wrote in message news:3cbb8222$1_1@newsa.ev1.net...
> Structurally not strong enough, and weighs allot more than aluminum. It
> would bend out of shape in no time at all.
>
> --
> Respond to my "real" e-mail;
> kk5dr@ev1.net
> "Bpitt" <bpitt@aol.com> wrote in message
> news:20020415091140.27712.00003698@mb-fs.aol.com...
> > About to get my first rig. I was licensed back in February and have been
> > studying the 'build-it-yourself' websites'. My question is this, every
> example
> > has used aluminum tubing for the beams, except the copper j-pole I saw.
> Can I
> > not use copper instead of aluminum on the beams? Is it not as good?
The
> > reason is I have a LOT of copper tubing left over from some plumbing
work
> I
> > helped with. I just thought that maybe I could use it for my 2 meter
beam
> > instead of having to buy the aluminum stuff. Any thoughts? Thank you for
> your
> > time.
> > KD5RJF
>
>

3028. Re: Antenna material? Copper?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-17 02:24:33 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <3V4v8.264$RO2.39785@news1.iquest.net>
Source record: 44670

Oh...you must have missed the part about 2m beams....

Gawd!! I hope he's not building a J-Pole for 80m!!!

<grin>

73

--
==========
KB9BVN/QRP - New Whiteland IN - EM69WN
QRP-ARCI #10223 QRP-L #1540 FIST #5695
FISTS CC #764 - Proud Member ARRL
HEATH HW-9 @ 2W or NORCAL 40A @ 1.3W
INTO INFAMOUS AF4PS ATTIC DIPOLE
SOC #400 AND FLYING PIGS QRP #-57
==========

"M.E." <bogus@nospam.com> wrote in message news:3cbcb4fc_1@newsa.ev1.net...
> Oh, I thought we were talking about "real" antennas for HF, my bad. I
shall
> now bow out of this discussion.
>
> --
> Respond to my "real" e-mail;
> kk5dr@ev1.net
> "Harold E. Johnson" <W4ZCB@mchsi.com> wrote in message
> news:PwUu8.40383$G72.33990@sccrnsc01...
> >
> > "M.E." <bogus@nospam.com> wrote in message
> > news:3cbb8222$1_1@newsa.ev1.net...
> > > Structurally not strong enough, and weighs allot more than aluminum.
It
> > > would bend out of shape in no time at all.
> > >
> > Not so at all. In the 50's I built a channel 2 three element TV yagi
> > (plumbers delight) and had it up for 7 years. HD copper is pretty tough
> > stuff. I wouldn't have any trepidations in using it at least down thru 6
> > meters, but it isn't going to be light.
> >
> > W4ZCB
> >
> >
>
>

3029. finding Ham Radio Magazine??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-17 04:05:19 UTC
From: AB brown <abbrown@nospammail.com>
Message-ID: <a9is89$d6p$1@slb6.atl.mindspring.net>
Source record: 44671
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Where can I find back issues of Ham Radio Magazine? I'm mainly interested in 1970's and 1980's issues (specific articles).

Thanks,
AB

3030. Re: finding Ham Radio Magazine??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-17 04:32:13 UTC
From: Dan Richardson <k6mhe@arrl.net>
Message-ID: <4lupbucmd3u1p4t1ikc8167cr3g1uov7h1@4ax.com>
Source record: 44673
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Both the ARRL and CQ magazine have HR on CDs.

Danny, K6MHE

On Wed, 17 Apr 2002 00:05:19 -0400, "AB brown"
<abbrown@nospammail.com> wrote:

>Where can I find back issues of Ham Radio Magazine? I'm mainly interested
>in 1970's and 1980's issues (specific articles).
>
>Thanks,
>AB
>

3031. Re: finding Ham Radio Magazine??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-17 04:41:16 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CBCFD05.7348@pop.removethistomailme.net>
Source record: 44672
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

AB brown wrote:
>
> Where can I find back issues of Ham Radio Magazine? I'm mainly interested
> in 1970's and 1980's issues (specific articles).
>
> Thanks,
> AB

You can usually find the print editions on eBay. Or the complete set
can be ordered on CD-ROM from http://www.arrl.org. Nice to have.

-- jm

---

http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3032. Re: FE Rubidium oscillator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-17 05:50:43 UTC
From: "Dr. P. Seifert" <p.seifert@profile-optsys.com>
Message-ID: <a9j2fk$3hnqh$1@ID-74846.news.dfncis.de>
Source record: 44674
Body handling: HTML body converted to readable text

"Zed" schrieb im Newsbeitrag
news:a9hc8iofh1@news1.Radix.Net...
> In article ,
> Dr. P. Seifert wrote:
> >Hi,
> >
> >bougth a rubidium oscillator via EBAY. As I saw, some more of these
> >devices were sold there, mainly to hams.
> >I'm looking now for the connection scheme and possibly some more
> >technical data.
> >Has anybody some info for me?
> >
> >Oscillator: FE 5650A with option 58 from Frequency Electronics.
>
> Frequency Electronics has some info for you. The first place to check
> for this kind of information is the manufacturer's web site.
> If you go to their web site you'll find a 12 page PDF brochure that
> includes technical specifications and pin outs for the connector.
> It also lists options, but option 58 is not among them.
>
> The brochure includes basic description of rubidium frequency
> standards and would be of use to anyone that would like to learn
> a little about them.
>

Hi Zed,
thanks, but of course I have this document.
But Option 58 shows a completely different
20 pin mini-conector. That's why I'm asking...
Pedro

3033. Source code NHRC 10 repeater controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-17 07:09:45 UTC
From: Hermann Boehm <beka.boehm@t-online.de>
Message-ID: <a9j73jeps04$1@news.t-online.com>
Source record: 44675

Hi,
I would like some functions of the NHRC 10 repeater controller to change for
German needs (without phone funtion, etc.).
Therefore I search for this controller the source code.
Can anybody help me?
Thanks in advance.

73 de Hermann, DK6XH

3034. Re: S2001A TUBE, HELP YOUR DATES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-17 08:28:21 UTC
From: Claude Frantz <claude@pc0312a.rz.unibw-muenchen.de>
Message-ID: <3CBD3225.EB237BBE@pc0312a.rz.unibw-muenchen.de>
Source record: 44676
Cross-posted to: rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

J M Noeding wrote:

> >> Do you have a data sheet of the S2001A ?
> >
> >
> I don't really understand the point requiring the data, if it is
> exactly like 6146B, you may look yourself at
> http://frank.nostalgiaair.org/sheets6.html

Although the 6146B is the only known substitute of the S2001A,
these tubes are not exactly the same. I would like to see both
data sheets in order to see what is the same and what is different.

3035. Re: FE Rubidium oscillator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-17 14:25:00 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3CBD85BC.1D4B704F@ix.netcom.com>
Source record: 44677

Pedro,
That was a version made specially for Motorola and FE will not release the information. A bit of poking around inside will probably tell you what to do if you are brave enough :-)

One of the people selling these on eBay did include the connections though, so the information is out there.

I have one of the older bigger Efratom units fitted in a Racal 9475 standard and that was pretty easy to sort out...
GL
Dan

3036. Re: Crystal tester help please

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-17 17:16:47 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0204170916.73fd21f2@posting.google.com>
Source record: 44678

wa0goz@arrl.net wrote in message news:<3CBCB177.14B8@arrl.net>...
> A number of years ago, I built a crystal or crystal filter tester. I
> just ran across it, not having used it for some time. It was a grounded
> base input and output transistor with the crystal or filter inserted in
> between. Does anyone remember such a beast and where I got it from. I
> might like to use it again, but can't remember what it was all about.
> (Senior Moment). Thanks and 73
>
> Henry WA0GOZ

I rember seeing schematics for crystal testers that were nothing but a
single transistor oscillator. It would oscillate at the fundamental
frequency of the crystal. Is this what you have?

Jim
N8EE

3037. PMR help wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-17 18:04:54 UTC
From: "Alexander S. Wood" <alec_wood@nospamplease.ntlworld.com>
Message-ID: <vPiv8.44781$C21.8394221@news6-win.server.ntlworld.com>
Source record: 44679
Cross-posted to: alt.ham-radio.mods,alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

Anyone got any info on Marconi RC748 radio.

Looking to convert for ham use

Thanks

Alec Wood M1BNK

3038. PMR help wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-17 18:04:54 UTC
From: "Alexander S. Wood" <alec_wood@nospamplease.ntlworld.com>
Message-ID: <RQiv8.44788$C21.8395985@news6-win.server.ntlworld.com>
Source record: 44680
Cross-posted to: alt.ham-radio.mods,alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

Anyone got any info on Marconi RC748 radio.

Looking to convert for ham use

Thanks

Alec Wood M1BNK

3039. Re: FE Rubidium oscillator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-17 18:37:20 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0204171037.2519a75@posting.google.com>
Source record: 44681

Dan Rae <rae4@ix.netcom.com> wrote in message news:<3CBD85BC.1D4B704F@ix.netcom.com>...
> Pedro,
> That was a version made specially for Motorola and FE will not release the
> information. A bit of poking around inside will probably tell you what to
> do if you are brave enough :-)
>
> One of the people selling these on eBay did include the connections though,
> so the information is out there.
>
> I have one of the older bigger Efratom units fitted in a Racal 9475 standard
> and that was pretty easy to sort out...
> GL
> Dan

It's a bit late to mention this, but Stanford Research advertises the
PRS10 Rubidium Frequency Standard for $1495, quantity 1.

http://www.srsys.com/html/body_prs10.html

Cheers, Mike

3040. Re: Crystal tester help please

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-17 18:53:33 UTC
From: rcnixon@mindspring.com
Message-ID: <3cbdc481.2843551@news.mindspring.com>
Source record: 44682

jim.bolinger@lintek.aeroflex.com (JLB) wrote:

>wa0goz@arrl.net wrote in message news:<3CBCB177.14B8@arrl.net>...
>> A number of years ago, I built a crystal or crystal filter tester. I
>> just ran across it, not having used it for some time. It was a grounded
>> base input and output transistor with the crystal or filter inserted in
>> between. Does anyone remember such a beast and where I got it from. I
>> might like to use it again, but can't remember what it was all about.
>> (Senior Moment). Thanks and 73
>>
>> Henry WA0GOZ
>
>I rember seeing schematics for crystal testers that were nothing but a
>single transistor oscillator. It would oscillate at the fundamental
>frequency of the crystal. Is this what you have?
>
>Jim
>N8EE
This months QST has an article about grid dip oscillators. One can be
used to test crystals.

Russ
"Two-fifteen, no ambulance needed!"
Subtract all nines to reply

3041. Re: finding Ham Radio Magazine??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-17 18:54:24 UTC
From: crabtreejr@aol.com
Message-ID: <20020417145424.01632.00001037@mb-mg.aol.com>
Source record: 44683

Hello AB

Do you have a list of requirements? Please email me directly.

73 John KC0GGH

>From: "AB brown" abbrown@nospammail.com on 4/16/02 wrote:

>Where can I find back issues of Ham Radio Magazine? I'm mainly
>interested in 1970's and 1980's issues (specific articles).
>Thanks,
>AB

3042. Re: Crystal tester help please

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-17 19:44:43 UTC
From: wa0goz@arrl.net
Message-ID: <3CBDD0AB.293E@arrl.net>
Source record: 44684

JLB wrote:
>
> wa0goz@arrl.net wrote in message news:<3CBCB177.14B8@arrl.net>...
> > A number of years ago, I built a crystal or crystal filter tester. I
> > just ran across it, not having used it for some time. It was a grounded
> > base input and output transistor with the crystal or filter inserted in
> > between. Does anyone remember such a beast and where I got it from. I
> > might like to use it again, but can't remember what it was all about.
> > (Senior Moment). Thanks and 73
> >
> > Henry WA0GOZ
>
> I rember seeing schematics for crystal testers that were nothing but a
> single transistor oscillator. It would oscillate at the fundamental
> frequency of the crystal. Is this what you have?
>
> Jim
> N8EE

No it's not Jim. I have something with two grounded base transistors,
one on the input and one on the output, with the crystal or crystal
filter placed between them. The circuit did not oscillate, but was a
way of loading the crystal or crystal filter with the proper impedances.
There was a pot on both the input and the output to the crystal or
crystal filter.

Thanks and 73

Henry

3043. Re: Crystal tester help please

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-17 19:55:26 UTC
From: la8ak.xnd@online.no
Message-ID: <3cbdcfcc.431831651@news.online.no>
Source record: 44685

On 17 Apr 2002 10:16:47 -0700, jim.bolinger@lintek.aeroflex.com (JLB)
wrote:

>wa0goz@arrl.net wrote in message news:<3CBCB177.14B8@arrl.net>...
>> A number of years ago, I built a crystal or crystal filter tester. I
>> just ran across it, not having used it for some time. It was a grounded
>> base input and output transistor with the crystal or filter inserted in
>> between. Does anyone remember such a beast and where I got it from. I
>> might like to use it again, but can't remember what it was all about.
>> (Senior Moment). Thanks and 73
>>
>> Henry WA0GOZ
>
>I rember seeing schematics for crystal testers that were nothing but a
>single transistor oscillator. It would oscillate at the fundamental
>frequency of the crystal. Is this what you have?
>
>Jim
>N8EE
made a pierce oscillator with 6AK5, measured grid current like a GDM,
believe somebody mentioned using GDM as xtal tester. See the note I
posted on xtal tester some time ago

73' LA8AK
--
remove ,xnd to reply

3044. Re: Crystal tester help please

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-17 23:37:59 UTC
From: la8ak.xnd@online.no
Message-ID: <3cbe062a.445751744@news.online.no>
Source record: 44686

with an RF-detector connected to the output this circuit will operate
as xtal tester

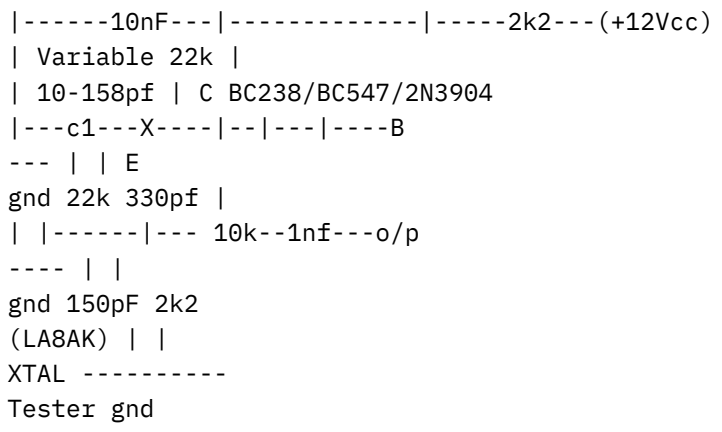
Repost

Some years ago xtal testers seem to be interesting projects, and
several circuits were described in the magazines for handy tester you
could bring with you when you were looking for surplus xtals, probably
FT243 then.

Below is shown a simplified circuit for an xtal tester, this is just
connected to my counter, and some xtals has been tested since the
tuning capacitor is 150pF and will give some indication of xtal tuning
ranges.
It seems that xtals made for colour burst oscillators may be pulled
more than others, but otherwise xtals are pullable by a degree which
rises with frequency, and channel xtals for VHF sets seem not less
pullable than other xtals. The circuit is just an ordinary XO, not
VCXO, but still xtals may have the required pull range for certain
applications.

73
Jan-Martin
LA8AK
---

xtal tester; Some xtals tested 2002.04.07 (LA8AK)
complete circuit diagram is available as gif file, and scanned photo
as jpg-file



xtals tested (type HC18=HC49 or HC25=HC50 when no remarks)

1512: 1511.76-1512.36, df=0.6 HC6/U
1536: 1535.93-1536.41, df=0.5 HC6/U

3581.250: 3580.88-3582.33, df=1.45kHz HC6/U
3686.4: 3686.18-3687.7, dF=1.5kHz
4194.304: 4193.96-4196.09, dF=2.1kHz
4434.61875: 4431.38-4435.69 (HC6U TV colour burst xtal), df=4.3kHz
4444.4: 4443.79-4447.00, df=3.2 HC6/U
6000: 6000.45-6003.32 NDK HC18, df=2.9kHz
6553.6: 6552.45-6557.81, df=5.5kHz
6506.25: 6504.5-6511.1 HC6/U, dF=6.5kHz
7864.32: 7869.32-7863.01, dF=6.3kHz
8000: 8001.67-8008.67, df=7kHz
9216.0: 9214.62-9221.51, df=6.9kHz, TEW
9403.125: 9401.75-9408.67, df= 6.9kHz, HC6/U
10240: 10238.54-10246.08, df=7.5khz NDK HC18
11595.18: 11593.66-11601.28, df=7.5kHz, HC6/U
13352.08: 13350.34-13359.94, df=9.6
14318: 14317.75-14329.35, dF=11.6kHz, computer xtal
17645.80: 17643.26-17654.55, df=11.3kHz
26786: 8927.86-8934.97, df=7.1, NDK
26965: 8993.444-8999.146
26965: 8993.571-8999.841
26965: 8993.744-8999.731
26985: 8993.78-8999.78, df=6kHz
26985: 8999.511-9005.690
26985: 8999.693-9005.916
27005: 8999.38-9007.11, df=6.73
27005: 8999.517-9007.100
27005: 8999.763-9007.661,
52500: 17479-17494, df=15kHz, HC6/U

--
remove ,xnd to reply

3045. Re: finding Ham Radio Magazine??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-18 00:48:00 UTC
From: robrk <robrk@pgh.net>
Message-ID: <3CBE17C0.F8A9524@pgh.net>
Source record: 44687
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

What are you looking for? Been tossing a few a week after reviewing and scanning.
Just tossed the ones you need.....

AB brown wrote:
>
> Where can I find back issues of Ham Radio Magazine? I'm mainly interested
> in 1970's and 1980's issues (specific articles).
>
> Thanks,
> AB

3046. AM Modulation Distortion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-18 01:21:15 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <946sbu8rm0lk7lcricarg1tcd3gifhap3h@4ax.com>
Source record: 44690

I've been tinkering with a low power (100 mW) synthesized AM broadcast band transmitter. Synthesizer is working and now I've got the transmitter and modulator section going.

I'm seeing a strange distortion when I look at the modulated envelope. There is a time shift between the positive envelope peak and the negative envelope peak. It can be seen easily with a modulating sine wave signal of 10 KHz. There's around 7 to 8 microseconds delta between the top envelope peak and the bottom envelope peak. This peak shift corresponds to around 30 degrees phase shift at 10 KHz. At 1 KHz, the result is a tolerable signal, but the distortion becomes more objectionable as the modulating frequency increases.

I'm seeing this both on the real circuit and on the computer model that I've constructed with MultiSim 2001, so I'm inclined to view the problem as inherent, not caused by some component parasitics.

My suspicions center around the 2N7000's behavior at the bottom crests of the modulating waveform. It's acting differently with, say, < 1 volt or so VDD at the bottom of the modulation cycle.

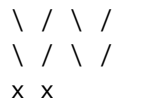
A quick description of the circuit is a square wave VCO output (5 volts peak), drives a 2N7000 MOSFET through a 74HC00 gate used as a buffer. Output of 2N7000 goes to a five pole low pass filter to turn the square wave into sine wave. Test RF frequency is 1000 KHz, but same problem is seen with other frequencies.

Modulation is via a series emitter follower NPN (TIP31) transistor, driven by a Norton amp (LM3900). RF is kept out of the modulator with a series pair of 330 uH chokes and 4700 pF bypass caps. (I'm going to have to alter this a bit, as these values do roll off the 10 KHz audio a bit.)

With no modulation, output of the emitter follower is set to 5.5 volts. Modulation swings take this up to 10.5 volts and down to 0.5 volts. Feedback to the Norton amp is from the emitter of the modulation transistor. Supply voltage is 15 volts, to provide some headroom for the modulation transistor.

I can send a JPG of the output waveform or a schematic of the transmitter if it will be of assistance. Here's an ASCII art version of the output envelope:

```
-a- -a-
/ \ / \
/ \ / \
/ \_ / \
```



the negative peak (x) occurs at about 7 to 8 microseconds later than
the positive peak (a).

Jack K8ZOA

3047. Re: Crystal tester help please

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-18 02:53:42 UTC
From: "Milton L. Hooper" <MHOOPER1@houston.rr.com>
Message-ID: <Wyqv8.9087$R33.401578@typhoon.austin.rr.com>
Source record: 44688

You're circuit description doesn't match too well, but perhaps you are thinking of an article from January 1990 QST. The article is by Doug DeMaw intitled "A Tester for Crystal F, Q and R". The article is reprinted in the current ARRL publication "W1FB Design Notebook". Hope this helps.

Regards,

Lee
KG5VU
"J M Noeding" <la8ak.xnd@online.no> wrote in message
news:3cbdcfcc.431831651@news.online.no...
> On 17 Apr 2002 10:16:47 -0700, jim.bolinger@lintek.aeroflex.com (JLB)
> wrote:
>
> >wa0goz@arrl.net wrote in message news:<3CBCB177.14B8@arrl.net>...
> >> A number of years ago, I built a crystal or crystal filter tester. I
> >> just ran across it, not having used it for some time. It was a
grounded
> >> base input and output transistor with the crystal or filter inserted in
> >> between. Does anyone remember such a beast and where I got it from. I
> >> might like to use it again, but can't remember what it was all about.
> >> (Senior Moment). Thanks and 73
> >>
> >> Henry WA0GOZ
> >
> >I rember seeing schematics for crystal testers that were nothing but a
> >single transistor oscillator. It would oscillate at the fundamental
> >frequency of the crystal. Is this what you have?
> >
> >Jim
> >N8EE
> made a pierce oscillator with 6AK5, measured grid current like a GDM,
> believe somebody mentioned using GDM as xtal tester. See the note I
> posted on xtal tester some time ago
>
> 73' LA8AK
> --
> remove ,xnd to reply

3048. Re: Curing static on panel meter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-18 03:28:43 UTC
From: "A. Punnett" <ajpunnett@sympatico.ca>
Message-ID: <3CBE3D6B.C553C505@sympatico.ca>
Source record: 44689

That' s not a good idea. The degaussing coil will demagnetize the meter movement.

3049. Re: Mounting a 2 meter radio in exedition?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-18 05:00:56 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <cqsv8.17$Ev5.34369@monger.newsread.com>
Source record: 44691
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.swap

I drive a 4-Runner.

The control head is mounded on the console with double sided tape for the
bracket.
The RF deck, which is mounted on an Aluminum plate goes under the seat.
I was going to put some velcro on the bottom to keep it from sliding, but
never found a need.

--
Roger (K8RI EN73)
WWW.RogerHalstead.com
N833R, World's Oldest Debonair? S#CD-2

"Bill Hall" <bhallc21@flash.net> wrote in message
news:3CBCA1C0.BA6123E4@flash.net...
> Carl:
> You might consider something innovative as I had to do on a lease vehicle.
I
> have a 99 Explorer (Limited) and there is NO spare space , so I made up
two
> inverted "J"
> brackets; bolted them to the mobile mount bracket, mounted the bracket to
the
> bottom of the radio and hung it from the center console(open the console,
hang
> it on and close the cover). No holes to drill, easily reachable/readable
and
> when I leave the vehicle for an extended period, I open the console; raise
the
> radio up and slide it under the seat. Works for me! If you're interested,
> e-mail me direct and I'll tell you about the "no holes visible" roof mount
I
> made! G.I. ingenuity!
>
> Bill kd5reg
>
> Carl Walthall wrote:
>
> > Hi All
> >
> > I have a 1998 Ford Expedition that I would like to put a 2 meter radio
in.
> > Can someone tell me the best position to mount the radio an antenna so

that
> > I dont damage the SUV?
> >
> > Thanks Carl
>

3050. Re: AM Modulation Distortion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-18 06:18:04 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <wytv8.74249$3L2.6514068@bin7.nnrp.aus1.giganews.com>
Source record: 44692

I would first check the measurement equipment and procedure. I have seen this too but can't quite recall what caused it; the subject wave was fine but it looked that way on the oscilloscope.

Check the probe compensation. Also, make sure the probe isn't loading the circuit or the oscilloscope isn't being driven into distortion.

3051. Re: AM Modulation Distortion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-18 06:51:26 UTC
From: "I.R.Baboon" <i.r.baboon@volcanomail.com>
Message-ID: <3CBE6CEE.88BCE8DB@volcanomail.com>
Source record: 44693

I presume Your Computer model (MultiSim2001) is working
by means of Volterra-series, and as this phenomenon is seen
also in the simulation that it is indeed a real phenomenon,
and not a mesurement set-up prolem (which is the first guess).

What You are watching is "AM/PM- phenomenon". How hard do
You drive the modulator? (not enough information available in
Your question). - You'll need a substansial "back-off", so
that You during the entire modulation cycle is within a
perfectly (or very near perfectly) linear part of the curve.

In short: If You alter the DC biasing of Your modulator and
at the same time lower the LF drive level, what happends?
You will have to live with bad efficency. This has been the
truth for A.M. systems since the dawn of time. You need that
irritating idle "no-use" idle current.

Or, the problem might be in the final amp. of Your system.
Try the same as above! Higher efficiency than 20% should not
be expected, if You want a "good behaviour".

But, as input data is insufficient, the problem might be
elsewhere. And, what has AM broadcast with amateur radio to do?
Rgrds,
"I.R Baboon"

Jack Smith wrote:
>
> I've been tinkering with a low power (100 mW) synthesized AM broadcast
> band transmitter. Synthesizer is working and now I've got the
> transmitter and modulator section going.
>
> I'm seeing a strange distortion when I look at the modulated envelope.
> There is a time shift between the positive envelope peak and the
> negative envelope peak. It can be seen easily with a modulating sine
> wave signal of 10 KHz. There's around 7 to 8 microseconds delta
> between the top envelope peak and the bottom envelope peak. This peak
> shift corresponds to around 30 degrees phase shift at 10 KHz. At 1
> KHz, the result is a tolerable signal, but the distortion becomes more
> objectionable as the modulating frequency increases.
>
> I'm seeing this both on the real circuit and on the computer model
> that I've constructed with MultiSim 2001, so I'm inclined to view the
> problem as inherent, not caused by some component parasitics.
>
> My suspicions center around the 2N7000's behavior at the bottom crests

> of the modulating waveform. It's acting differently with, say, < 1
> volt or so VDD at the bottom of the modulation cycle.
>
> A quick description of the circuit is a square wave VCO output (5
> volts peak), drives a 2N7000 MOSFET through a 74HC00 gate used as a
> buffer. Output of 2N7000 goes to a five pole low pass filter to turn
> the square wave into sine wave. Test RF frequency is 1000 KHz, but
> same problem is seen with other frequencies.
>
> Modulation is via a series emitter follower NPN (TIP31) transistor,
> driven by a Norton amp (LM3900). RF is kept out of the modulator with
> a series pair of 330 uH chokes and 4700 pF bypass caps. (I'm going to
> have to alter this a bit, as these values do roll off the 10 KHz audio
> a bit.)
>
> With no modulation, output of the emitter follower is set to 5.5
> volts. Modulation swings take this up to 10.5 volts and down to 0.5
> volts. Feedback to the Norton amp is from the emitter of the
> modulation transistor. Supply voltage is 15 volts, to provide some
> headroom for the modulation transistor.
>
> I can send a JPG of the output waveform or a schematic of the
> transmitter if it will be of assistance. Here's an ASCII art version
> of the output envelope:
>
> -a- -a-
> / \ / \
> / \ / \
> / _ / \
> \ / \ /
> \ / \ /
> x x
>
> the negative peak (x) occurs at about 7 to 8 microseconds later than
> the positive peak (a).
>
> Jack K8ZOA

3052. Multiband coaxial collinear array

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-18 09:35:30 UTC
From: Hans Peter Winkler <h.winkler@genescan.com>
Message-ID: <a9m3sh$4cvsk$1@ID-125322.news.dfncis.de>
Source record: 44694

Is it possible to build a multiband coaxial collinear array? (E.g. 80, 170 and 440 MHz) I searched with GOOGLE, at the US Patent-Server and in the Rothammel(very good german antenna-book, but I could find nothing. I would be glad about every advice or idea. Please excuse my bad english (I'm a german "Krautfresser")!

Thanks in advance
Hans Peter

3053. Help with JWMiller guide

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-18 14:51:47 UTC
From: Mark Mansfield <mwmansfield@qwest.net>
Message-ID: <oYBv8.482$dx3.38750@news.uswest.net>
Source record: 44696
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I'm looking for a J W Miller guide and cross reference. In all my moves,
I've lost the one I had.
The one I'm looking for is beige or tan in color, was printed in the 70's (I
believe, my memory isn't
what it used to be :-)
I would gladly pay copy and shipping cost, or if you have one for sale, let
me know.

Thanks in advance!
Mark

3054. Re: AM Modulation Distortion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-18 15:24:31 UTC
From: gaschafer@attbi.com
Message-ID: <3cbee5ed.2662864@netnews.attbi.com>
Source record: 44695

Your low pass filter may be too close to the operating frequency and
causing angle modulation
of the signal?

73
Gary K4FMX

On Thu, 18 Apr 2002 01:21:15 GMT, Jack Smith <jsmith@mnsinc.com>
wrote:

>I've been tinkering with a low power (100 mW) synthesized AM broadcast
>band transmitter. Synthesizer is working and now I've got the
>transmitter and modulator section going.
>
>I'm seeing a strange distortion when I look at the modulated envelope.
>There is a time shift between the positive envelope peak and the
>negative envelope peak. It can be seen easily with a modulating sine
>wave signal of 10 KHz. There's around 7 to 8 microseconds delta
>between the top envelope peak and the bottom envelope peak. This peak
>shift corresponds to around 30 degrees phase shift at 10 KHz. At 1
>KHz, the result is a tolerable signal, but the distortion becomes more
>objectionable as the modulating frequency increases.
>
>I'm seeing this both on the real circuit and on the computer model
>that I've constructed with MultiSim 2001, so I'm inclined to view the
>problem as inherent, not caused by some component parasitics.
>
>My suspicions center around the 2N7000's behavior at the bottom crests
>of the modulating waveform. It's acting differently with, say, < 1
>volt or so VDD at the bottom of the modulation cycle.
>
>A quick description of the circuit is a square wave VCO output (5
>volts peak), drives a 2N7000 MOSFET through a 74HC00 gate used as a
>buffer. Output of 2N7000 goes to a five pole low pass filter to turn
>the square wave into sine wave. Test RF frequency is 1000 KHz, but
>same problem is seen with other frequencies.
>
>Modulation is via a series emitter follower NPN (TIP31) transistor,
>driven by a Norton amp (LM3900). RF is kept out of the modulator with
>a series pair of 330 uH chokes and 4700 pF bypass caps. (I'm going to
>have to alter this a bit, as these values do roll off the 10 KHz audio
>a bit.)
>
> With no modulation, output of the emitter follower is set to 5.5
>volts. Modulation swings take this up to 10.5 volts and down to 0.5

>volts. Feedback to the Norton amp is from the emitter of the
>modulation transistor. Supply voltage is 15 volts, to provide some
>headroom for the modulation transistor.
>
>I can send a JPG of the output waveform or a schematic of the
>transmitter if it will be of assistance. Here's an ASCII art version
>of the output envelope:
>
> -a- -a-
> / \ / \
> / \ / \
>/ _ / \
>\ / \ /
> \ / \ /
> x x
>
>the negative peak (x) occurs at about 7 to 8 microseconds later than
>the positive peak (a).
>
>
>Jack K8ZOA

3055. Re: IRF510 vs IRF520 (was: IRF510 schematic ?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-18 16:14:28 UTC
From: Walter Muth <dk1bn@amsat.org>
Message-ID: <3CBEF0E4.9060501@amsat.org>
Source record: 44597

Roy Lewallen wrote:
> killer spec for these devices is the capacitance, which is very high
> and, like any diode reverse capacitance, nonlinear. The tricky part of
> designing a rig using a VMOS device is dealing with this. The 520 is
> basically two 510 chips wired in parallel. This gives you twice the
> current handling capability, half the on resistance, and. . . there
> ain't no free lunch. . . twice the capacitance. In general, a project
> designed for a 510 can't use a 520, and usually can't easily be
> redesigned to handle one.
>
> Roy Lewallen, W7EL

Hi all,

what are the criteria for selecting one of these MOSFETs for using it in an
amplifier for HF ? Capacitance parameters Ciss, Coss and Crss only ?
Other parameters are interesting for switching applications only?

I have an amplifier(working on 40..10mtrs 100Watts pwr out) with defective
MOSFETs (2 parallel and push-pull= 4 MOSFETs)TO-220 package but identification
of the MOSFETs removed. So I tried IRF530 (high Ciss abt 920p) and could get out
about 100 Watts on 40mtrs(4Watts input pwr) but decreasing to 20Watts on 28MHz.
With the original types you could easily get out 100Watts up to 28MHz
with 0.5Watts of input power.

Any suggestions ?

73ï¿½s
Walt
DK1BN

3056. ** FLEA at MIT ** This coming Sunday April 21st Cambridge MA

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-18 16:45:27 UTC
From: w1gsl@mit.edu
Message-ID: <3cbef827$0$3942$b45e6eb0@senator-bedfellow.mit.edu>
Source record: 44598
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,rec.radio.info,sci.electronics.misc,ne.forsale,ne.general,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

This coming Sunday....

*** !!!! In our Traditional GARAGE and lot !!!! ****
so come rain or shine or super heat the Flea is on !!!

********* $1 buyers discount with hardcopy of this notice ********

COMPUTERS - ELECTRONICS - HAM RADIO - COMPUTERS - ELECTRONICS - HAM RADIO

FLEA all SUMMER at MIT
Sunday April 21st 2002
9AM-2PM

Come to the city for a great flea - plenty of free parking.

MIT's electronics and ham radio flea will take
place on the third Sunday of each month this summer,
April thru October.

There is tailgate space for over 600 sellers and
free, off-street parking for >2000 cars!

Buyers admission is $5 (you get $1 off if
you're lucky enough to have a copy of our ad)
and sellers spaces are $20 for the first and
$15 for each additional at the gate.

The flea will be held at the corner of Albany and
Main streets in Cambridge; right in the Kendall
Square area from 9AM to 2PM, with sellers set-up
time starting at 7AM.

SEASON PASS + Advance Discounts

A sellers discount season pass is available which
offers a 33% discount. See the advanced registration
form below for full seller info.

*** Attention Sellers ***
Prepaid vendors.. Season Pass or monthly,
will be admitted FIRST.
Separate lines will form prior to gate opening
for prepaid and nonprepaid vendors

!! RAIN or SHINE !! Have no fear of rain, a covered
well illuminated tailgate area is available for all

sellers (6'8" clearance).

Talk-in: 145.23- (PL 88.5) W1BOS/R and
W1XM/R-449.725/444.725 (PL 114.8/2A).

Sponsors: MIT Electronics Research Society
MIT UHF Repeater Association (W1XM)
MIT Radio Society (W1MX)
Harvard Wireless Club (W1AF)

For more info / advanced reservations 617 253 3776

********** $1 buyers discount with hard copy of this notice ************

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Mail the coupon below by the 5th of the month to be a Prepaid Vendor.

FLEA at MIT 2001 Rates

SELLERS

This year each vendor must have a Cambridge Vendor License.
We will do all the paperwork to get the one day Cambridge licenses.
To keep the spaces affordable we are discounting your first space.
To use your spaces the named vendor MUST be present.
Rates include one admission per space.

Season Pass $99 First Space - includes $70 for Cambridge Vendor Licenses
$70 additional spaces

Advance $17 First space - includes $10 Cambridge Vendor License
$12 Additional Spaces
Must be received by the 5th of the month.

Gate Admission $20 First Space - includes $10 Cambridge Vendor License
$15 Additional Spaces
Admission is after the prepaid vendors

Early Bird Buyer -Admission after the prepaid vendor line is admitted. ~ 7:15AM
** You may not sell. **
$15 per person at the gate.
$70 Season Early Bird Buyer

****************************** cut here ******************************

FLEA at MIT 2002 Advance Space Application

_____ 1st Season Pass @ $99 _____ Additional Season Spaces @ $70

____April ____May ____June ____ July ____Aug ___Sept ____Oct
@ $17 for the first each month + $12 each additional

_____ Season Early Bird Buyer @ $70 ** NB You may not sell. **

Name _____ Call _____ $ Included_____

Address _____ Phone _____ Make Check to
The MIT Radio Society
City _____ State _____ Zip _____ PO Box 397082
Cambridge MA 02139
E-mail _____

****
Steve Finberg W1GSL w1gsl@mit.edu
PO Box 82 MIT Br Cambridge MA 02139-7082 617 258 3754
****

3057. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-18 17:09:59 UTC
From: "R. Belcher" <randy.belcher@verizon.net>
Message-ID: <H5Dv8.6095$93.2784@nwrddc04.gnilink.net>
Source record: 44599
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

OOOOOk... so what did we decide here?? I've read until I'm lost. The conversion seems to me to be capable of legal limit using 2 tubes... Should I convert my amp?
rb

3058. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-18 17:23:25 UTC
From: Gary - KJ6Q <davison7@gte.net>
Message-ID: <hiDv8.30820$bn2.25251@nwrddc01.gnilink.net>
Source record: 44600
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

WHICH conversion?

There were several under discussion - the one using the Russian triodes certainly looked the most
promising and economical to me...

--
Gary - KJ6Q
****
Two things we'll never see:
1. Perpetual motion...
2. A liberal Democrat complaining
about "Too much government"

"R. Belcher" <randy.belcher@verizon.net> wrote in message
news:H5Dv8.6095$93.2784@nwrddc04.gnilink.net...
> OOOOOk... so what did we decide here?? I've read until I'm lost. The
> conversion seems to me to be capable of legal limit using 2 tubes... Should
> I convert my amp?
> rb
>
>
>
>

3059. Re: AM Modulation Distortion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-18 18:19:59 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <dh2ubu0bh7vu87kmin0fb00kfnnvqvb97o@4ax.com>
Source record: 44601

Thanks to all. Good suggestions one and all.

Following up on the AM-to-PM theory, I measured the phase shift between the square wave VCO output and the LPF sine output for varying Vdd voltages this morning. I used a Tek TDS-430 scope with automatic phase difference measurements, with channel 1 on the synthesizer VCO output and channel 2 on the 50 ohm termination at the LPF output.

With no modulation input, I adjusted my quiescent drive pot to vary the Vdd over the range of about 0.5 volts to 10.5 volts.

What I found was a close to linear phase versus voltage shift (R=0.993 for a linear fit) when I plotted 11 phase versus Vdd measurements. The conversion ratio is 2.0 degrees/volt, based upon a linear fit to the data.

I took the data at a carrier frequency a bit below the 3 dB LPF point (data at 1 MHz; 3 dB filter point ~ 1.2 MHz), so I'll take some more data well below the LPF cutoff and see if that's the problem.

My back of the envelope calculations show that for a 10 KHz sine wave modulating signal, and kp=2.0 degrees/volt (0.035 radians/volt), I have a maximum instantaneous frequency shift of 1.75 KHz.

So, it looks like AM-to-PM problem. The next step is to determine where it is occurring. And, then, how to reduce it.

Jack K8ZOA

On Thu, 18 Apr 2002 15:24:31 GMT, gaschafer@attbi.com (Gary Schafer) wrote:

>Your low pass filter may be too close to the operating frequency and
>causing angle modulation
>of the signal?
>
>73
>Gary K4FMX
>
>
>On Thu, 18 Apr 2002 01:21:15 GMT, Jack Smith <jsmith@mnsinc.com>
>wrote:
>
>>I've been tinkering with a low power (100 mW) synthesized AM broadcast
>>band transmitter. Synthesizer is working and now I've got the
>>transmitter and modulator section going.
>>

>>I'm seeing a strange distortion when I look at the modulated envelope.
>>There is a time shift between the positive envelope peak and the
>>negative envelope peak. It can be seen easily with a modulating sine
>>wave signal of 10 KHz. There's around 7 to 8 microseconds delta
>>between the top envelope peak and the bottom envelope peak. This peak
>>shift corresponds to around 30 degrees phase shift at 10 KHz. At 1
>>KHz, the result is a tolerable signal, but the distortion becomes more
>>objectionable as the modulating frequency increases.
>>
>>I'm seeing this both on the real circuit and on the computer model
>>that I've constructed with MultiSim 2001, so I'm inclined to view the
>>problem as inherent, not caused by some component parasitics.
>>
>>My suspicions center around the 2N7000's behavior at the bottom crests
>>of the modulating waveform. It's acting differently with, say, < 1
>>volt or so VDD at the bottom of the modulation cycle.
>>
>>A quick description of the circuit is a square wave VCO output (5
>>volts peak), drives a 2N7000 MOSFET through a 74HC00 gate used as a
>>buffer. Output of 2N7000 goes to a five pole low pass filter to turn
>>the square wave into sine wave. Test RF frequency is 1000 KHz, but
>>same problem is seen with other frequencies.
>>
>>Modulation is via a series emitter follower NPN (TIP31) transistor,
>>driven by a Norton amp (LM3900). RF is kept out of the modulator with
>>a series pair of 330 uH chokes and 4700 pF bypass caps. (I'm going to
>>have to alter this a bit, as these values do roll off the 10 KHz audio
>>a bit.)
>>
>> With no modulation, output of the emitter follower is set to 5.5
>>volts. Modulation swings take this up to 10.5 volts and down to 0.5
>>volts. Feedback to the Norton amp is from the emitter of the
>>modulation transistor. Supply voltage is 15 volts, to provide some
>>headroom for the modulation transistor.
>>
>>I can send a JPG of the output waveform or a schematic of the
>>transmitter if it will be of assistance. Here's an ASCII art version
>>of the output envelope:
>>
>> -a- -a-
>> / \ / \
>> / \ / \
>>/ _ / \
>>\ / \ /
>> \ / \ /
>> x x
>>
>>the negative peak (x) occurs at about 7 to 8 microseconds later than
>>the positive peak (a).
>>

>>
>>Jack K8ZOA

3060. Re: Multiband coaxial collinear array

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-18 19:26:29 UTC
From: k7itm@aol.com
Message-ID: <3200347.0204181126.28d0116b@posting.google.com>
Source record: 44602

(Seems like a better question for the "antennas" group...)

A key problem, as I see it, is that the coaxial construction relies on each section of the coax to give you 180 degree phase shift (or equivalently 180+n*360 degrees) at the operating frequency. With lossless (and to a good approximation with low loss) line, this is achieved independent of the load impedance at each feed node along the antenna. But clearly, it occurs only for frequencies f, 3f, 5f, ..., assuming the velocity factor is constant with frequency. If you have to start adding other components to get the phase shifts you want on all operating frequencies, I think the beauty of the design is no longer there. To me, that means operation of a single structure on, say, 147MHz + 441MHz (+/- a bit on each band) makes some sense, but probably not on 80+170+440.

Cheers,
Tom

"Hans Peter Winkler" <h.winkler@genescan.com> wrote in message news:<a9m3sh$4cvsk$1@ID-125322.news.dfncis.de>...
> Is it possible to build a multiband coaxial collinear array? (E.g. 80, 170
> and 440 MHz) I searched with GOOGLE, at the US Patent-Server and in the
> Rothammel(very good german antenna-book, but I could find nothing. I would
> be glad about every advice or idea. Please excuse my bad english (I'm a
> german "Krautfresser")!
>
> Thanks in advance
> Hans Peter

3061. Re: AM Modulation Distortion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-18 19:29:30 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <3i7ubuoq25mmj1l422rc1o09bgn6lprq2a@4ax.com>
Source record: 44603

On Thu, 18 Apr 2002 18:19:59 GMT, Jack Smith <jsmith@mnsinc.com>
wrote:

>My back of the envelope calculations show that for a 10 KHz sine wave
>modulating signal, and kp=2.0 degrees/volt (0.035 radians/volt), I
>have a maximum instantaneous frequency shift of 1.75 KHz.

Forgot to say, calculation based on quiescent point of 5.5 volts, AM
modulation 10 V PP (corresponding to Vdd swing from 0.5 volts to 10.5
volts on modulation peaks).

Jack K8ZOA

3062. Re: AM Modulation Distortion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-18 20:00:53 UTC
From: gaschafer@attbi.com
Message-ID: <3cbf26b0.19244159@netnews.attbi.com>
Source record: 44604

Try a resonant tank circuit in the collector of the stage you are
modulating. Look at it without
the low pass filter.

73
Gary K4FMX

On Thu, 18 Apr 2002 19:29:30 GMT, Jack Smith <jsmith@mnsinc.com>
wrote:

>On Thu, 18 Apr 2002 18:19:59 GMT, Jack Smith <jsmith@mnsinc.com>
>wrote:
>
>>My back of the envelope calculations show that for a 10 KHz sine wave
>>modulating signal, and kp=2.0 degrees/volt (0.035 radians/volt), I
>>have a maximum instantaneous frequency shift of 1.75 KHz.
>
>Forgot to say, calculation based on quiescent point of 5.5 volts, AM
>modulation 10 V PP (corresponding to Vdd swing from 0.5 volts to 10.5
>volts on modulation peaks).
>
>Jack K8ZOA

3063. I'm lookuing for HF preselector project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-18 21:02:34 UTC
From: Bruno IK1VHX <bruno.lusu@tin.it>
Message-ID: <KvGv8.36504$vF6.1107979@news2.tin.it>
Source record: 44605

Hi! My name is Bruno from Genoa North Italy.(IK1VHX callsign)
I'm looking for very good project about HF preselector tunable from 1.8 MHz
to 30 MHz passive or active with not high gain preamplifier (10 or 20 dB max
AGC controlled) low noise and high IMD.
Do you have any schematic diagram full solid state or with tubes?
I'd like to homebrew a professional receiver from 1.8 to 30 MHz all modes
demodulator high level first mixer and ten band pass filters automatic
selected from DDS used to drive first OL.
I'd like to use a tunable preselector after band pass filters to improve
performance of receiver and cut out indesired signals.
Thanks and 73 de IK1VHX bruno
bruno.lusu@tin.it

3064. Info wtd: CV25, CV266, CV622, CV704

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-18 21:09:26 UTC
From: Browser/Jhb <browser@acenet.co.za>
Message-ID: <a9ncmu$2ig$1@ctb-nnrp1.saix.net>
Source record: 44606
Cross-posted to: rec.antiques.radio+phono,rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Please excuse the cross-posting, I'm really not sure where's
the best place to ask.
I'm looking for data - pin out, max ratings, typical
operating conditions - for these old tube types:

CV25 (also called 4242C or VT4C)
CV266 (809)
CV622 (802)
CV704 (RK20-A, 5B-600A)

I've tried web and newsgroup searches without success.
Email me direct if you like, or if this is off topic for
this group.

Thanks a mil

Dave McDonald
Johannesburg

3065. Re: Info wtd: CV25, CV266, CV622, CV704

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-18 22:14:57 UTC
From: chrisdot muriel <muriel@analogdot.com>
Message-ID: <m4hubu4ufuf7195kljpk6tei66gker5bk@4ax.com>
Source record: 44607
Cross-posted to: rec.antiques.radio+phono,rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Thu, 18 Apr 2002 23:09:26 +0200, "Browser/Jhb"
<browser@acenet.co.za> wrote:

>Please excuse the cross-posting, I'm really not sure where's
>the best place to ask.
>I'm looking for data - pin out, max ratings, typical
>operating conditions - for these old tube types:
>
>CV25 (also called 4242C or VT4C)
>CV266 (809)
>CV622 (802)
>CV704 (RK20-A, 5B-600A)
>
>I've tried web and newsgroup searches without success.
>Email me direct if you like, or if this is off topic for
>this group.
>
>Thanks a mil
>
>Dave McDonald
>Johannesburg
>
>
I don't have the specs to hand but can help further with equivalents
from my old "Service Valve & Semiconductor Equivalents" book
(published by RSGB in 1967).
CV25 : ES85 (AEI), 424A (STC), 242C (Am), UE311 (Am), 211 (Am)
CV622 : 802 (Am)
CV704: RK20A (Am), CV624
Now for CV624 we have : 804 (Am).

Where Am must be American Manufacture (these days we'd say "USA").
and, of course "valve" = tube.

Chris Muriel, G3ZDM, Manchester, UK

3066. Re: noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-19 00:57:28 UTC
From: Ed Riggs <riggsed@usa.net>
Message-ID: <YXJv8.19539$L1.1530045@newsread2.prod.itd.earthlink.net>
Source record: 44608
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Don't forget to check for the possibility that the Icom blanker could be broken.

Ed

"AB Brown" <abbrown@nospammail.com> wrote in message news:a93aas$68n$1@slb1.atl.mindspring.net...
Currently, I am using two amateur radios for communicating: one is the Icom 718 and the other, strictly for 10 meters, is an older Realistic HTX-100. I have used the HTX-100 for about 5 years now and I just obtained the Icom less than 6 months ago. I am puzzled by something though that I was wondering if anyone could address- the noise blanker on the HTX is FAR superior to the one on the Icom. I am wondering why? The Icom was a lot more expensive and I just figured it would have a better blanker. It has AF DSP option, which I tried, and was disappointed. In every case on 10 meters, the HTX receives better due to blanked noise effectiveness.

I doubt I could internally modify the Icom's blanker for better performance so I am wondering if I could add an external, synchronous (or other ?) type noise blanker at the antenna input. I have read a few things about this type of blanker and, apparently by using noise generators, you can match the phase of incoming noise and cancel it out. Any suggestions for a blanker, either internal or external? I understand the synchronous type is better at lower Mhz, but will it work for 10/15 meters?

I believe the main sources of noise at my QTH are computer (of course) and pole transformer noise. The computer noise is easily solved (by turning off my monitor) but I have experienced the transformer noise for many years, and the HTX blanker always nullified it.

Appreciate any suggestions from the groups.

Thanks,
AB

3067. Re: Info wtd: CV25, CV266, CV622, CV704

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-19 00:58:13 UTC
From: Robert Casey <wa2ise@ix.netcom.com>
Message-ID: <3CBF6BA4.76E1E4A3@ix.netcom.com>
Source record: 44609
Cross-posted to: rec.antiques.radio+phono,rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Browser/Jhb wrote:

> Please excuse the cross-posting, I'm really not sure where's
> the best place to ask.

No problem.. This is the proper use of cross posting. One
should use crossposting to a few closely reverent newsgroups
rather than sending individual posts to each.

>
> I'm looking for data - pin out, max ratings, typical
> operating conditions - for these old tube types:
>
> CV25 (also called 4242C or VT4C)
> CV266 (809)
> CV622 (802)
> CV704 (RK20-A, 5B-600A)

Try the web site:
http://www.audiohot.com/Frank/index.html

lots of curves and data for many tubes.

3068. LM386

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-19 03:18:06 UTC
From: Xu <salers@hamal.freemail.ne.jp>
Message-ID: <a9o27o$6iv$1@mail.cn99.com>
Source record: 44610

Hi!
I'm planing to build a transceiver,
I want to use LM386 as audio amplifer,could someone how to shut it very quiet when transmiting?
73! Xu

3069. Re: Piezo Xtal Oscillators

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-19 03:19:59 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <z1Mv8.39174$QC1.2582328@bgtnsc04-news.ops.worldnet.att.net>
Source record: 44611

It depends on what kind you are talking about; the small Epson types, such as the SG636 around 4 dollars each in small quantities. Also, you can even buy user programmable units for not much more. eBay? Might be worth a shot.

Pete KE9OA

Tony Angerame <tangeram@lucent.com> wrote in message news:a9hndq$10k@nntpb.cb.lucent.com...
> I recently picked up a grab bag of these things at a flea market. Many
> frequencies i.e. 10, 20, 13, 50, 30 mhz.. Some big and some small. Is there
> any real value to these? Is it worth my time to put them on Ebay?
>
> Thanks,
>
>
> Tony WA6LZH
>
>

3070. Re: New Life for Dentron MLA2500s HELP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-19 05:07:42 UTC
From: "R. Belcher" <randy.belcher@verizon.net>
Message-ID: <yCNv8.6778$93.1063@nwrddc04.gnilink.net>
Source record: 44612
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

I suppose it was that one... Here is a link I was looking over, is it the
same conversion you mention??
thanks!
Randy

http://www.svetlana.com/docs/TechBulletins/technoteNo14.html

If that isn't the proper one, could you please direct me to it.
thanks.

"Gary - KJ6Q" <davison7@gte.net> wrote in message
news:hiDv8.30820$bn2.25251@nwrddc01.gnilink.net...
> WHICH conversion?
>
> There were several under discussion - the one using the Russian triodes
certainly looked the most
> promising and economical to me...
>
> --
> Gary - KJ6Q
> **********
> Two things we'll never see:
> 1. Perpetual motion...
> 2. A liberal Democrat complaining
> about "Too much government"
>
> "R. Belcher" <randy.belcher@verizon.net> wrote in message
> news:H5Dv8.6095$93.2784@nwrddc04.gnilink.net...
> > OOOOOk... so what did we decide here?? I've read until I'm lost. The
> > conversion seems to me to be capable of legal limit using 2 tubes...
Should
> > I convert my amp?
> > rb
> >
> >
> >
> >
>

3071. Re: Multiband coaxial collinear array

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-19 09:25:17 UTC
From: Hans Peter Winkler <h.winkler@genescan.com>
Message-ID: <a9onla$520q2$1@ID-125322.news.dfncis.de>
Source record: 44613

Hello Tom,

you're right,but I didn't get an answer to my question at the "antennas" group, so I tried it (successfully!thanks!) in this group.
I think you're right with your technical answer too, unfortunately for me, because I thought such an antenna would be the best for my applications. I think I will build one for 440 MHz (from 8 halfwave-pieces of RG58 or RG213) at this weekend, hoping it brings a little performance on the other frequencies, though they're not harmonically related.

Hans Peter

"Tom Bruhns" <k7itm@aol.com> schrieb im Newsbeitrag news:3200347.0204181126.28d0116b@posting.google.com...
> (Seems like a better question for the "antennas" group...)
>
> A key problem, as I see it, is that the coaxial construction relies on
> each section of the coax to give you 180 degree phase shift (or
> equivalently 180+n*360 degrees) at the operating frequency. With
> lossless (and to a good approximation with low loss) line, this is
> achieved independent of the load impedance at each feed node along the
> antenna. But clearly, it occurs only for frequencies f, 3f, 5f, ...,
> assuming the velocity factor is constant with frequency. If you have
> to start adding other components to get the phase shifts you want on
> all operating frequencies, I think the beauty of the design is no
> longer there. To me, that means operation of a single structure on,
> say, 147MHz + 441MHz (+/- a bit on each band) makes some sense, but
> probably not on 80+170+440.
>
> Cheers,
> Tom
>
> "Hans Peter Winkler" <h.winkler@genescan.com> wrote in message news:<a9m3sh$4cvsk$1@ID-125322.news.dfncis.de>...
> > Is it possible to build a multiband coaxial collinear array? (E.g. 80, 170
> > and 440 MHz) I searched with GOOGLE, at the US Patent-Server and in the
> > Rothammel(very good german antenna-book, but I could find nothing. I would
> > be glad about every advice or idea. Please excuse my bad english (I'm a
> > german "Krautfresser")!
> >
> > Thanks in advance
> > Hans Peter

3072. Re: I'm lookuing for HF preselector project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-19 11:18:59 UTC
From: Ricardo Martins <ricardo.martins@pt.uu.net>
Message-ID: <3CBFFD22.54844C3B@pt.uu.net>
Source record: 44614

Ciao Bruno,

Check this one:
http://members.aol.com/gapershi/radio/front_end/FEBV2schP1.gif (filter)
master site is: http://members.aol.com/gapershi/radio/radio.htm (the
complet project)

complimenti,
Ricardo / CT2GQV

Bruno IK1VHX wrote:
>
> Hi! My name is Bruno from Genoa North Italy.(IK1VHX callsign)
> I'm looking for very good project about HF preselector tunable from 1.8 MHz
> to 30 MHz passive or active with not high gain preamplifier (10 or 20 dB max
> AGC controlled) low noise and high IMD.
> Do you have any schematic diagram full solid state or with tubes?
> I'd like to homebrew a professional receiver from 1.8 to 30 MHz all modes
> demodulator high level first mixer and ten band pass filters automatic
> selected from DDS used to drive first OL.
> I'd like to use a tunable preselector after band pass filters to improve
> performance of receiver and cut out indesired signals.
> Thanks and 73 de IK1VHX bruno
> bruno.lusu@tin.it

--
Ricardo Martins

3073. Solid State PA questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-19 11:46:18 UTC
From: George <sp2brz@pit.gda.pl>
Message-ID: <a9p00masn1@news.tpi.pl>
Source record: 44615

Hi there,
I can buy not for much money 2 pieces of the professional 300 watts HF solid state modules. If I buy it I would like to combine it into one PA. So I look for some transformer combiner circuit working well with that power on the frequecy range of 1.5 to 30 Mc.
Another question is a set of switched low-pass filters working with 600 watts. And a power supply 50V DC/20A...
:-)))
Can anyone help me?
Thanks,
George, SP2BRZ.

3074. Re: LM386

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-19 15:14:53 UTC
From: john graesser <graesser@tca.net>
Message-ID: <uc0cvdosmdap33@corp.supernews.com>
Source record: 44616

"Xu" <salers@hamal.freemail.ne.jp> wrote in message
news:a9o27o$6iv$1@mail.cn99.com...
> Hi!
> I'm planing to build a transceiver,
> I want to use LM386 as audio amplifer,could someone how to shut it very
> quiet when transmiting?
> 73! Xu

The brute force method found in my 70's era txrs is to switch off powr to
the reciever when the transmitter is keyed. When the transmitter is unkeyed,
the power to the transmitter is turned off and power to the reciever is
turned back on.
thanks, John.
KC5DWD

3075. Re: I'm lookuing for HF preselector project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-19 20:17:43 UTC
From: kb9olm@yahoo.com
Message-ID: <cba55a41.0204191217.5ddee32f@posting.google.com>
Source record: 44617

Hi Bruno,

In a most cases receiver front end does not need very much of a
(takeover) gain.
Depending on the Noise Figure of your (first) mixer, the front end has
to provide just enough gain to establish required sensitivity. Any
extra gain will degrade the IM performance of the radio.
In most cases 3 to 8 dB of net gain at the front end is enough.
Tunable preselector is a very conservative and effecient tool to
minimize out of band interferers. But again, for in-band interfering
signals you want to have as little gain as possible considering that
you met your sensitivity considerations. For the tube RF amp. I would
use 1AD4 submin. tube (also known as 5678 submin. tube). This tube is
cheap and widely available. Makes a good mixer as well. This tube is a
direct cathode 1.25 Volt filament voltage and it can work with about
50 volt of plate voltage. Very safe!

73,
Vlad
kb9olm
ex. ua3acr (1960 to 1980).
near Oakland CA, USA

"Bruno IK1VHX" <bruno.lusu@tin.it> wrote in message
news:<KvGv8.36504$vF6.1107979@news2.tin.it>...
> Hi! My name is Bruno from Genoa North Italy.(IK1VHX callsign)
> I'm looking for very good project about HF preselector tunable from 1.8 MHz
> to 30 MHz passive or active with not high gain preamplifier (10 or 20 dB max
> AGC controlled) low noise and high IMD.
> Do you have any schematic diagram full solid state or with tubes?
> I'd like to homebrew a professional receiver from 1.8 to 30 MHz all modes
> demodulator high level first mixer and ten band pass filters automatic
> selected from DDS used to drive first OL.
> I'd like to use a tunable preselector after band pass filters to improve
> performance of receiver and cut out indesired signals.
> Thanks and 73 de IK1VHX bruno
> bruno.lusu@tin.it

3076. Icom 2c for GE Mastr II

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-19 21:44:22 UTC
From: dan fleming <danl@csonline.net>
Message-ID: <1103_1019252673@news.csonline.net>
Source record: 44618

Ebay Item 1346297822
General Electric Mastr II High Stability 2C ICOM's. Bid Is For Four (4) ICOM's. Two (2) 19A129393G15, Transmit 2C (2 PPM, 406-512 MhZ) Internally Compensated, And Two (2) 19A129393G4, Receive 2C (2PPM) Internally Compensated. Tested, Good Working Condition. Buyer To Pay $4 For U.S. Shipping/Insurance. Buyer To Pay With Money Order Within 10 Days Of Auction Closing. PayPal Accepted If Shipping To A Confirmed Address.

3077. GE Mastr II - 2C Icom's FS on Ebay

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-19 21:47:13 UTC
From: dan fleming <danl@csonline.net>
Message-ID: <1105_1019252842@news.csonline.net>
Source record: 44619

Ebay Item 1346297822

General Electric Mastr II High Stability 2C ICOM's. Bid Is For Four (4) ICOM's. Two (2) 19A129393G15, Transmit 2C (2 PPM, 406-512 MhZ) Internally Compensated, And Two (2) 19A129393G4, Receive 2C (2PPM) Internally Compensated. Tested, Good Working Condition. Buyer To Pay $4 For U.S. Shipping/Insurance. Buyer To Pay With Money Order Within 10 Days Of Auction Closing. PayPal Accepted If Shipping To A Confirmed Address.

3078. Re: Castro used a BC348?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-19 22:00:26 UTC
From: ocibma@aol.com
Message-ID: <20020419180026.27429.00003693@mb-mr.aol.com>
Source record: 44620

looked like a vikeing 1

3079. Re: LM386

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-19 23:00:34 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <uc18e73pgm6g9a@corp.supernews.com>
Source record: 44621

In order to avoid switching "pops" most rigs use a JFET to interrupt the input signal to the amp. You can find a number of examples in the ARRL Handbook.

3080. Re: Help with JWMiller guide

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-19 23:11:28 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <3CC0A390.ECB9E8A3@flash.net>
Source record: 44622
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hi Mark,
In the interim, if you haven't looked, there's the on-line catalog:
http://www.jwmiller.com/products.htm
Steve AA7U

Mark Mansfield wrote:
>
> I'm looking for a J W Miller guide and cross reference. In all my moves,
> I've lost the one I had.
> The one I'm looking for is beige or tan in color, was printed in the 70's (I
> believe, my memory isn't
> what it used to be :-)
> I would gladly pay copy and shipping cost, or if you have one for sale, let
> me know.
>
> Thanks in advance!
> Mark

3081. Re: Crystal tester help please

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-20 00:02:28 UTC
From: la8ak.xnd@online.no
Message-ID: <3cc0acdc.9698833@news.online.no>
Source record: 44623

On Thu, 18 Apr 2002 02:53:42 GMT, "Milton L. Hooper"
<MHOOPER1@houston.rr.com> wrote:

>You're circuit description doesn't match too well, but perhaps you are
>thinking of an article from January 1990 QST. The article is by Doug DeMaw
>intitled "A Tester for Crystal F, Q and R". The article is reprinted in the
>current ARRL publication "W1FB Design Notebook". Hope this helps.
>
>Regards,
>
>Lee
>KG5VU
Nope, I don't need to read an article for the simplest of all
constructions

--
remove ,xnd to reply

3082. Re: Info wtd: CV25, CV266, CV622, CV704

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-20 03:55:26 UTC
From: Browser/Jhb <browser@acenet.co.za>
Message-ID: <a9qorp$rn7$1@ctb-nnrp1.saix.net>
Source record: 44624
Cross-posted to: rec.antiques.radio+phono,rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Found what I wanted here:
http://www.nj7p.org/cgi-bin/tube
Interesting site.
Thanks to those who replied.
Dave McDonald
Johannesburg

"Browser/Jhb" <browser@acenet.co.za> wrote in message
news:a9ncmu$2ig$1@ctb-nnrp1.saix.net...
> Please excuse the cross-posting, I'm really not sure
where's
> the best place to ask.
> I'm looking for data - pin out, max ratings, typical
> operating conditions - for these old tube types:
>
> CV25 (also called 4242C or VT4C)
> CV266 (809)
> CV622 (802)
> CV704 (RK20-A, 5B-600A)
>
> I've tried web and newsgroup searches without success.
> Email me direct if you like, or if this is off topic for
> this group.
>
> Thanks a mil
>
> Dave McDonald
> Johannesburg
>
>
>
>

3083. Re: Solid State PA questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-20 04:49:07 UTC
From: Rick Karlquist <richard@karlquist.removethis.com>
Message-ID: <7r6w8.18000$CH.3620@rwcrnsc52.ops.asp.att.net>
Source record: 44625

See Helge Granberg's QST articles or his Motorola application
notes. Also, look at combiner kits from Communications
Concepts in Ohio.

Rick N6RK

"George" <sp2brz@pit.gda.pl> wrote in message
news:a9p00masn1@news.tpi.pl...
> Hi there,
> I can buy not for much money 2 pieces of the professional 300 watts HF
solid
> state modules. If I buy it I would like to combine it into one PA. So I
look
> for some transformer combiner circuit working well with that power on the
> frequecy range of 1.5 to 30 Mc.
> Another question is a set of switched low-pass filters working with 600
> watts. And a power supply 50V DC/20A...
> :-)))
> Can anyone help me?
> Thanks,
> George, SP2BRZ.
>
>

3084. Re: Need Ham Radio Mag Article

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-20 05:19:09 UTC
From: D & B Rude <brewman@merr.com>
Message-ID: <hT6w8.2759$fH5.3556954@kent.svc.tds.net>
Source record: 44626

Thanks for all your help. This is a great way to further the hobby. I
received two articles in the mail and I thank you kindly.
73
Ohhhh has anybody done the 6 meter mod on the SB-200?

D & B Rude <brewman@merr.com> wrote in message
news:dgCu8.2185$fH5.2412290@kent.svc.tds.net...
> I am looking for a copy of an article which appeared in the November 1971
> issue of Ham Radio Magazine. The article was about the Heathkit linear
amp,
> I beleive, the SB220. Any help would be greatly appreciated. Snail mail
adr
> is Dave Rude, POB 72, Oxford, WI, 53952. Thanks
> KA9SRU
>
>

3085. Schematic for TECH tube tester

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-20 11:18:37 UTC
From: mail@hansenaudio.se
Message-ID: <663f1bba.0204200318.7e37b35f@posting.google.com>
Source record: 44627

I search for schematic on TECH CS-2 tube tester, or if somebody know a company that still have service and spareparts for the old TECH measurement instruments.

3086. VCO s ,syntesizer s and pll s !!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-20 12:34:47 UTC
From: joshua <ita@email.hinet.hr>
Message-ID: <a9ro7q$1uh$1@as201.hinet.hr>
Source record: 44628

i would like to know some interesting web sites where i can find shematics,pcb s and some good informations for vco s,pll and syntesizer s for 2 meter band and other frequencies .thanks in advance !!!73 de 9a3xz-mladen-pula -croatia !!!

3087. Re: VCO s ,syntesizer s and pll s !!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-20 16:14:36 UTC
From: Wolfgang Kabelka <office@kmc.com>
Message-ID: <a9s486$ur7$1@newsreader1.netway.at>
Source record: 44629

Have a look at following pages:

2m RX
http://www.sonic.net/~shageman/2_meter.html
http://www.tapr.org/tapr/html/Fdsp10.html
http://home.welfen-netz.com/IngoGerlach/2mrx/2mrx.html

Technical background
http://hem.passagen.se/communication/meny.html
http://w1.859.telia.com/~u85920178/

wolfgang

"joshua" <ita@email.hinet.hr> schrieb im Newsbeitrag
news:a9ro7q$1uh$1@as201.hinet.hr...
> i would like to know some interesting web sites where i can find
> shematics,pcb s and some good informations for vco s,pll and syntesizer s
> for 2 meter band and other frequencies .thanks in advance !!!73 de
> 9a3xz-mladen-pula -croatia !!!
>
>
>
>

3088. HV capacitor question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-20 20:52:11 UTC
From: brian_mull@agilent.com
Message-ID: <59e3ae16.0204201252.668deb99@posting.google.com>
Source record: 44630

Hi all

I am trying to homebrew a high voltage air variable cap for an antenna tuner.
What is the relationship between peak voltage rating, working DC voltage, and dielectric breakdown voltage. I ask because I saw an air variable cap advertised on the RF Parts web site that had a peak rating of 5300 volts with a plate spacing of only .12 inches. This doesn't add up with the numbers I calculate using data from the ARRL handbook, so I figure I must be confused somewhere. TIA.

brian

3089. Re: HV capacitor question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-20 21:29:08 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <3cc1daad$1_2@newsa.ev1.net>
Source record: 44631

Most of the rating you read on air caps, are for DC, you might figure that
RF would be 60% of that rating.
Weather your system exceeds that rating, will depend on if your feed is a
voltage or current node.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"brian" <brian_mull@agilent.com> wrote in message
news:59e3ae16.0204201252.668deb99@posting.google.com...
> Hi all
>
> I am trying to homebrew a high voltage air variable cap for an antenna
> tuner.
> What is the relationship between peak voltage rating, working DC
> voltage, and dielectric breakdown voltage. I ask because I saw an air
> variable cap advertised on the RF Parts web site that had a peak
> rating of 5300 volts with a plate spacing of only .12 inches. This
> doesn't add up with the numbers I calculate using data from the ARRL
> handbook, so I figure I must be confused somewhere. TIA.
>
> brian

3090. Re: FE Rubidium oscillator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-20 23:51:33 UTC
From: gc@radix.net
Message-ID: <a9suu5$m46$1@news1.Radix.Net>
Source record: 44632

In article <7e4a2a11.0204171037.2519a75@posting.google.com>,
Mike Monett <mrmonett@yahoo.com> wrote:
>
>It's a bit late to mention this, but Stanford Research advertises the
>PRS10 Rubidium Frequency Standard for $1495, quantity 1.
>
> http://www.srsys.com/html/body_prs10.html
>

That is interesting information. I really didn't know how much a
new one would cost. The used Efratom or FE ones show up on eBay
and go for a few hundred US$ or can be had from Lehman Scientific
for $500. But I do wonder what their remaining life would be.
Probably enough for anything I'd need.

3091. SIMPLE BFO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-21 02:02:24 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <Q4pw8.37853$Rw2.2848681@bgtnsc05-news.ops.worldnet.att.net>
Source record: 44633

Is there such a "thing" as a "passive" bfo? i want to add an external bfo to an am shortwave receiver. The only problem is i want a "batteryless" bfo or a least one that takes a AA battery.

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.350 / Virus Database: 196 - Release Date: 4/17/02

3092. Re: FE Rubidium oscillator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-21 02:34:19 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CC2254C.3F63@pop.removethistomailme.net>
Source record: 44634

Zed wrote:
> That is interesting information. I really didn't know how much a
> new one would cost. The used Efratom or FE ones show up on eBay
> and go for a few hundred US$ or can be had from Lehman Scientific
> for $500. But I do wonder what their remaining life would be.
> Probably enough for anything I'd need.

I don't think a rubidium standard is a good choice for most people.

IMHO, the average user is better off with a GPS-disciplined frequency standard like the one Brooks Shera described in the July '98 QST, one of the HP Z3801A GPS standards that are commonly seen on eBay, or a Trimble Thunderbolt unit (do a Google search for more info on any of these).

All of these options cost about as much as a used rubidium standard (in Shera's case, potentially quite a bit less). They all offer rubidium-class long-term stability, and for all practical purposes, perfect short-term stability as well. But unlike Rb sources, they don't use any exotic, failure-prone parts, so they can be left running 24/7 with no worries (and no aging, again unlike Rb sources).

You can count on the output of a GPS source to be substantially less than one part per billion, or better than one hertz per GHz. Sure, a rubidium source is an order of magnitude better over short periods, but few users outside of a physics laboratory need that kind of performance.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3093. Re: Solid State PA questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-21 03:30:43 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <Dnqw8.256622$Yv2.69152@rwcrnsc54>
Source record: 44635

George -

Here are Helge Granberg's (SK) application notes on the Communications Concepts web site.
http://www.communication-concepts.com/appnotes.htm

Communication Concepts Inc.
Telephone
937-426-8600
FAX
937-429-3811
Postal address
Communication Concepts Inc.
508 Millstone Dr.
Beavercreek, Oh. 45434-5840
Electronic mail
General Information: cci.dayton@pobox.com

Splitter and Combiners
http://www.communication-concepts.com/psc2.htm

Chebyshev Low Pass Filters
http://www.communication-concepts.com/filters.htm

As for a 50 VDC power supply, you may wish to check out surplus - 48 VDC units that are used for telephone service. These appear surplus from cellular and telephone companies.

Greg
w9gb

"Rick Karlquist" <richard@karlquist.removethis.com> wrote in message news:7r6w8.18000$CH.3620@rwcrnsc52.ops.asp.att.net...
> See Helge Granberg's QST articles or his Motorola application
> notes. Also, look at combiner kits from Communications
> Concepts in Ohio.
>
> Rick N6RK
>
> "George" <sp2brz@pit.gda.pl> wrote in message
> news:a9p00masn1@news.tpi.pl...
> > Hi there,
> > I can buy not for much money 2 pieces of the professional 300 watts HF
> solid
> > state modules. If I buy it I would like to combine it into one PA. So I
> look

> > for some transformer combiner circuit working well with that power on
the
> > frequecy range of 1.5 to 30 Mc.
> > Another question is a set of switched low-pass filters working with 600
> > watts. And a power supply 50V DC/20A...
> > :-)))
> > Can anyone help me?
> > Thanks,
> > George, SP2BRZ.
> >
> >
>
>

3094. Re: LM386

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-21 12:18:10 UTC
From: motsteve@mediaone.net
Message-ID: <motsteve-2104020821380001@c-66-176-88-250.se.client2.attbi.com>
Source record: 44636

In article <uc18e73pgm6g9a@corp.supernews.com>, "Bob Lewis \(AA4PB\)" <rlewis@staffnet.com> wrote:

> In order to avoid switching "pops" most rigs use a JFET to interrupt
> the input signal to the amp. You can find a number of examples in the
> ARRL Handbook.

A low power approach is to switch the bypass pin to ground. You can easily do this with a switching transistor such as the 2N3904 or equivalent. I believe the standby current during mute is around 600 uA. This also stops the bias and the output DC level shouldn't jump too much and will not make a big pop. This technique was used in the design of the Motorola HT90/440. If the ic's design was changed over the years this may not work (I haven't checked the schematic of the ic lately).

Another trick is to short out the negative feedback of an op amp ahead of the mic amp used as a preamp. As you know gain = Rf/Rin and if Rf is 0, then the gain is very negative. I used this in the Motorola Saber X controller. The signal driving the NPN was the raw battery at around 12vdc and the opamp was running at 7.5vdc so when the NPN xsistor was swithced on, the amp just shutted down as far as gain was concerned. Squelch pops were negligable as the circuit was driving a pair of headphones were this performance was crucial.

If you need a scheamtic, let me know and I'll see what I can come up with.

Steve WB4CZR (obviously an ex Moto engineer)
Plantation, FL

3095. Re: SIMPLE BFO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-21 12:48:51 UTC
From: Bill & Suzie Whatley <spud286@attbi.com>
Message-ID: <Tyyw8.96788$CH1.84960@sccrnsc02>
Source record: 44637

I am not aware of any kind of passive external BFO. If you modify a section of the I.F. string to provide some regeneration when needed, you might consider that semi-passive as it does not comprise a dedicated oscillator stage. (Hi Hi).

Just build a solid state BFO circuit on a small board and mount it inside the Rcvr. You can include rectification of the filament voltage, appropriate dropping resistor and regulator to get the low voltage DC needed for the circuit.

If you don't want to add a switch to the front panel of the Rcvr, you are probably going to have some kind of wiring exiting the equipment from the rear. If that is the case, you might as well run the third wire and pull power from the Rcvr for the external BFO.

73
WA5VRL
Willis

3096. VHF Engineering BLE 10/80

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-21 12:48:58 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <_yyw8.96789$CH1.85024@sccrnsc02>
Source record: 44638

Being posted for a friend
PLEASE respond to him at link provided BELOW

Hello friends,

does anybody have a VHF ENGINEERING amplifier model BLE 10/80 420-450MHz ?

I have to repair one of this model and I'm looking for more information's.
Inside at this amplifier I have discovered a burn resistor "flying" on the
board...

Value of this is missing and also the location where was solder.
Please if you have one of this can you help me ?

thank you.

73 de Andrea
IT9GSV@amsat.org
http://www.qsl.net/it9gsv

3097. Re: Need Ham Radio Mag Article

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-21 14:24:11 UTC
From: ricknj10@hotmail.com
Message-ID: <3cc2cad7.9659562@news.eclipse.net>
Source record: 44639

>Ohhhh has anybody done the 6 meter mod on the SB-200?

I have. It worked. But low efficiency.
Am going to do it right soon. New tank coil, remove bandswitch,
rewind the plate rf choke. Expect more like 700-900 watts when done.

Rick K2XT

3098. Re: SIMPLE BFO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-21 15:04:02 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <CxAw8.14630$Dm.1253894@bin2.nnrp.aus1.giganews.com>
Source record: 44640

Use the technique in the Hallicrafters S-38A and later. Provide feedback around the IF amplifier and switch it on and off.

A side benefit may be that the sensitivity is improved a bit.

The best approach is to feed back the output of the IF amplifier back to the input via a pair of series capacitors. Ground the junction to switch it off.

You won't have control over the pitch and it won't be stable.

I never tried it but you could put a 455 kHz crystal in the feedback path and make it stable.

3099. Re: HV capacitor question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-21 15:08:42 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <uc5lfv9ml8ph0f@corp.supernews.com>
Source record: 44641

In a Ten Tec linear at a ham fest I saw what I thought was an air variable
but on closer inspection it had what looked like teflon sheets in the
between the plates. HIgher voltage and capacitance!
"brian" <brian_mull@agilent.com> wrote in message
news:59e3ae16.0204201252.668deb99@posting.google.com...
> Hi all
>
> I am trying to homebrew a high voltage air variable cap for an antenna
> tuner.
> What is the relationship between peak voltage rating, working DC
> voltage, and dielectric breakdown voltage. I ask because I saw an air
> variable cap advertised on the RF Parts web site that had a peak
> rating of 5300 volts with a plate spacing of only .12 inches. This
> doesn't add up with the numbers I calculate using data from the ARRL
> handbook, so I figure I must be confused somewhere. TIA.
>
> brian

3100. Re: noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-21 16:04:23 UTC
From: Robert John <RAJohnGM@worldnet.att.net>
Message-ID: <bqBw8.42834$QC1.2955331@bgtnsc04-news.ops.worldnet.att.net>
Source record: 44642
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

From my experience, Icom don't make noise blanker!

"Ed Riggs" <riggsed@usa.net> wrote in message
news:YXJv8.19539$L1.1530045@newsread2.prod.itd.earthlink.net...
> Don't forget to check for the possibility that the Icom blanker could be
> broken.
>
> Ed
>
> "AB Brown" <abbrown@nospammail.com> wrote in message
> news:a93aas$68n$1@slb1.atl.mindspring.net...
> Currently, I am using two amateur radios for communicating: one is the
Icom
> 718 and the other, strictly for 10 meters, is an older Realistic HTX-100.
I
> have used the HTX-100 for about 5 years now and I just obtained the Icom
> less than 6 months ago. I am puzzled by something though that I was
> wondering if anyone could address- the noise blanker on the HTX is FAR
> superior to the one on the Icom. I am wondering why? The Icom was a lot
> more expensive and I just figured it would have a better blanker. It has
AF
> DSP option, which I tried, and was disappointed. In every case on 10
> meters, the HTX receives better due to blanked noise effectiveness.
>
> I doubt I could internally modify the Icom's blanker for better
performance
> so I am wondering if I could add an external, synchronous (or other ?)
type
> noise blanker at the antenna input. I have read a few things about this
> type of blanker and, apparently by using noise generators, you can match
the
> phase of incoming noise and cancel it out. Any suggestions for a blanker,
> either internal or external? I understand the synchronous type is better
at
> lower Mhz, but will it work for 10/15 meters?
>
> I believe the main sources of noise at my QTH are computer (of course) and
> pole transformer noise. The computer noise is easily solved (by turning
off
> my monitor) but I have experienced the transformer noise for many years,
and
> the HTX blanker always nullified it.
>

> Appreciate any suggestions from the groups.
>
> Thanks,
> AB
>
>
>
>

3101. Higher IP3 for MC1496, SO42P, TL442, SN76514N, NE/SA602 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-21 18:01:55 UTC
From: la8ak.xnd@online.no
Message-ID: <3cc2fc2b.161097197@news.online.no>
Source record: 44643

Just read the interesting notes for improving IP3 of MC1496 from the usual -20dBm towards +20dBm by Ian Briathwaite in Radcom TT Apr. 98, also shown in Technical topics scrapbook, and the following notes by G3RZP on SL6440. As alternative Gilbert cell mixer G4COL suggest to use 2x CA3046 (=3086?) with IP3 of over +20dBm.

Wonder if somebody has tried similar increased currents with other devices to achieve high IP3?

73
LA8AK
--
remove ,xnd to reply

3102. Re: SIMPLE BFO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-21 19:38:29 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <a9v5rq$64k$1@slb3.atl.mindspring.net>
Source record: 44644

One of the problems with adding a BFO to an existing radio is that the existing radios AGC circuitry will almost certainly get messed up.

Most AM radios use a detector for the AGC which will respond very nicely to the BFO signal which will then reduce the radios gain since it is detecting a powerful signal.

So, unless you can defeat the internal AGC and then adjust the radios gain manually, you are likely to find the radios sensitivity to be shot to blazes since as far as the radio AGC detector is concerned it is seeing a VERY STRONG signal on the input.

Jim Pennell
N6BIU

3103. AM Transmitter Project: Follow-up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-21 22:40:23 UTC
From: Martin Wehner <martin@cyclotomic.com>
Message-ID: <3CC33FD7.B7D2F09C@cyclotomic.com>
Source record: 44645

Hello Group-

For those interested, this is a brief follow-up to a call for help I had sent out to this newsgroup a few weeks back.

Thank you all so very much for all your help with my 160m AM transmitter project. I received a lot of really good feed-back and had a lot of people help me: thanks so much to you all.

I finally found some time to go back out to my work-bench and implement some of the circuits I had designed and tested on the computer.
Even though my output wave-forms don't look perfect, I did manage to modulate my carrier signal and obtained a pretty nice and clean looking envelope. I can easily pick up the signal on several different radios I tried.

Thanks to everyone who pitched in and helped out. I feel that I have learned a great deal and understand why the circuits do what they do.
I also picked up a copy of the ARRL "Solid State Design for the Radio Amateur" book and cannot wait to get my General class license to design, build, and operate some CW transmitters/receivers.

Thank you all for your help & encouragement!

Martin

Martin Wehner (KG6KLF)

e-mail: <martin@cyclotomic.com>
web: http://www.cyclotomic.com/~martin

3104. Re: SIMPLE BFO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-22 00:27:37 UTC
From: Tony Bogusz <tony_b@ameritech.net>
Message-ID: <ZNIw8.8499$d7.2605754@newssrv26.news.prodigy.com>
Source record: 44646

I bought such as device as a kit from TenTec several years ago. It runs off of a 9V battery. It has a coarse tuning control which needs to be adjusted when I change bands on my Panasonic RBF-60 portable, but then the fine tuning works great for zeroing in on the SSB signals. I've mounted the little ckt board in a plastic box which I place in close proximity to the Panasonic's telescoping antenna when I use the device.

It works great. Check it out. (Probably still available on their website for about ten bucks.)

tony, W9MT

Bob <balbert@cnmnetwork.com> wrote in message news:CxAw8.14630$Dm.1253894@bin2.nnrp.aus1.giganews.com...
> Use the technique in the Hallicrafters S-38A and later. Provide feedback
> around the IF amplifier and switch it on and off.
>
> A side benefit may be that the sensitivity is improved a bit.
>
> The best approach is to feed back the output of the IF amplifier back to
the
> input via a pair of series capacitors. Ground the junction to switch it
> off.
>
> You won't have control over the pitch and it won't be stable.
>
> I never tried it but you could put a 455 kHz crystal in the feedback path
> and make it stable.
>
>

3105. Cleaning Variable Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-22 01:43:09 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <NUJw8.43639$QC1.3032472@bgtnsc04-news.ops.worldnet.att.net>
Source record: 44547

Other than using a dishwasher or ultrasonic cleaner are there ways of
cleaning very dirty variable capacitors?

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.350 / Virus Database: 196 - Release Date: 4/17/02

3106. Re: Cleaning Variable Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-22 01:55:13 UTC
From: Gary Glaenzer <nobulltrans@mchsi.com>
Message-ID: <54Kw8.101213$CH1.89560@sccrnsc02>
Source record: 44548

"marvin rosen" <raghead@worldnet.att.net> wrote in message
news:NUJw8.43639$QC1.3032472@bgtnsc04-news.ops.worldnet.att.net...
> Other than using a dishwasher or ultrasonic cleaner are there ways of
> cleaning very dirty variable capacitors?
>
at the risk of incurring the wrath of some, I'll suggest Auto-Zone's best
el-cheapo carb cleaner (89 cents a can)

warning: it softens some plastics.....

3107. Re: Cleaning Variable Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-22 03:45:36 UTC
From: w4pqwhs@aol.com
Message-ID: <20020421234536.27910.00003983@mb-fb.aol.com>
Source record: 44549

>Other than using a dishwasher or ultrasonic cleaner are there ways of
>cleaning very dirty variable capacitors?
>

I like to use a solution called "air conditioner coil cleaner" get it at a refrig supply co mpany, comes in gallon size..Get a glass or plastic container, power in a cup or so of the solution,put the capacitor in and wash thoroughly using a bristle brush. rinse with fresh water allow to dry, it will look new..This is also good for ceramic coil forms,tube sockets, rotary switches etc..observe any cautions on the container. good luck Harold W4PQW

3108. relay that can handle 100 watts?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-22 10:29:33 UTC
From: AB Brown <abbrownnospam@mail.com>
Message-ID: <aa0oq3$en7$1@slb5.atl.mindspring.net>
Source record: 44550
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I'm looking for the manufacturer's part numbers (Mouser, Digi-Key, etc) for a DPDT or 3PDT 12 Vdc relay that can handle 100 watts RF at HF. The purpose will be to switch out a preamp on transmit. If specific part numbers aren't available, what relay characteristics should I look for?

Thanks,
AB

3109. Re: relay that can handle 100 watts?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-22 13:05:58 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <TVTw8.6283$xn.285971@news8-gui.server.ntli.net>
Source record: 44551
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

> I'm looking for the manufacturer's part numbers (Mouser, Digi-Key, etc)
for
> a DPDT or 3PDT 12 Vdc relay that can handle 100 watts RF at HF. The
purpose
> will be to switch out a preamp on transmit. If specific part numbers
aren't
> available, what relay characteristics should I look for?
==========
Any normal relay (preferably hermetically sealed) with a contact rating of
a few amperes will do the trick.
I have seen plastic cased relays for RF power duties in 100 W Yeas-ic-ken
transceivers not larger than 1/4 cubic inch.
However ensure that RF power does not hit the relay contacts before these
are fully closed and use all the contacts for a single duty eg don't use one
of the contacts for control purposes.
For control purposes use (a) separate relay(s)

Frank gm0csz.kn6wh@ntlworld.com

3110. Re: relay that can handle 100 watts?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-22 15:32:05 UTC
From: Joe Mama <joemama@prozac.net>
Message-ID: <q3b8cukg832bd7qmlc22d8nu10stk9ie8n@4ax.com>
Source record: 44552
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Mon, 22 Apr 2002 06:29:33 -0400, "AB Brown" <abbrownnospam@mail.com>
wrote:

> I'm looking for the manufacturer's part numbers (Mouser, Digi-Key, etc) for
> a DPDT or 3PDT 12 Vdc relay that can handle 100 watts RF at HF. The purpose
> will be to switch out a preamp on transmit. If specific part numbers aren't
> available, what relay characteristics should I look for?

> Thanks,
> AB

I can't give you any specs because I don't know your specific application,
but Dow Key has been making quality coaxial relays for years and they can no
doubt assist you..

www.dowkey.com

-jm

1968 XLCH under construction
1984 XR-1000
1987 Jaguar XJ6 Vanden Plas

To return mail no spam, change the reply address to:

"joemama at rarebird dot net"

3111. Re: Cleaning Variable Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-22 15:54:00 UTC
From: 4q <nospam@nospam-tek.com>
Message-ID: <aa1bbu0uhf@enews2.newsguy.com>
Source record: 44553

This very topic got discussed about 6 months ago either here or on glowbugs. Can't remember but the solution as IIRC was to boil then in a solution of water and lemon juice. I don't remember the details but you might try 1 cup juice per 2 cups water.

Rick KC0GIX

"marvin rosen" <raghead@worldnet.att.net> wrote in message news:NUJw8.43639$QC1.3032472@bgtnsc04-news.ops.worldnet.att.net...
> Other than using a dishwasher or ultrasonic cleaner are there ways of
> cleaning very dirty variable capacitors?
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.350 / Virus Database: 196 - Release Date: 4/17/02
>
>

3112. Re: relay that can handle 100 watts?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-22 16:50:09 UTC
From: "Alexander S. Wood" <alec_wood@nospamplease.ntlworld.com>
Message-ID: <QbXw8.6678$xn.297395@news8-gui.server.ntli.net>
Source record: 44554
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

"AB Brown" <abbrownnospam@mail.com> wrote in message
news:aa0oq3$en7$1@slb5.atl.mindspring.net...
> I'm looking for the manufacturer's part numbers (Mouser, Digi-Key, etc)
for
> a DPDT or 3PDT 12 Vdc relay that can handle 100 watts RF at HF. The
purpose
> will be to switch out a preamp on transmit. If specific part numbers
aren't
> available, what relay characteristics should I look for?
>
> Thanks,
> AB
>
>

Coaxial relays are the obvious choice here, but expensive and not really necessary at HF. Let's face it, all the commercial autotuners use bog standard plastic cased ones.

Personally, I would go for any big chunky single throw relay. Parallel all the contacts if it's a multipole, and do not use any spare contact sets for control purposes, there will doubtless be lots of RF on them. Assuming that the relay is not going to be sited at a point of extreme RF voltage, an auto-salvage yard should yield several contenders. Remember though, that the longer the switching elements are, the less isolation you'll have, so the more RF will get into your pre-amp when on TX.

Omron make some nice compact 250V 10A SPST relays with a 12V coil, almost ubiquitous in monitor and TV degaussing circuits. These have a BIG contact gap too to cope with any back emf off the coil, although the thermistor should mean there isn't any.

Careful choice of sequencing circuitry so there is no RF on the line when it is switched will help prolong the contacts' life.

Good luck

Alec Wood M1BNK

3113. Re: HV capacitor question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-22 17:09:31 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0204220909.21f70a98@posting.google.com>
Source record: 44555

brian_mull@agilent.com (brian) wrote in message
news:<59e3ae16.0204201252.668deb99@posting.google.com>...
> Hi all
>
> I am trying to homebrew a high voltage air variable cap for an antenna
> tuner.
> What is the relationship between peak voltage rating, working DC
> voltage, and dielectric breakdown voltage. I ask because I saw an air
> variable cap advertised on the RF Parts web site that had a peak
> rating of 5300 volts with a plate spacing of only .12 inches. This
> doesn't add up with the numbers I calculate using data from the ARRL
> handbook, so I figure I must be confused somewhere. TIA.
>
> brian

As a general rule of thumb, dry air has a break down of about 20,000 volts per inch. The actual break down voltage depends on a lot of factors. Two pointed objects, such as the sharp corners of a capacitor plate, will break down at a lower voltage and rounded objects at a higher voltage. Humidity will also lower the voltage limit. Any dielectric, in fact, will change it. Another post suggested using teflon between the plates.

Your 5300 volts at 0.12 inches works out to a derating factor of approximately 45% compared to my dry air number. I was going to say 50%, so anything in this ballpark would probably be adequate.

Go for it! Not enough people are homebrewing these days, in my opinion.

Jim
N8EE

3114. Re: SIMPLE BFO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-22 17:45:13 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0204220945.23998539@posting.google.com>
Source record: 44556

"marvin rosen" <raghead@worldnet.att.net> wrote in message
news:<Q4pw8.37853$Rw2.2848681@bgtnsc05-news.ops.worldnet.att.net>...
> Is there such a "thing" as a "passive" bfo? i want to add an external bfo to
> an am shortwave receiver. The only problem is i want a "batteryless" bfo or
> a least one that takes a AA battery.
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.350 / Virus Database: 196 - Release Date: 4/17/02

I have done this before, and it works:

If you have a 'cheap' shortwave receiver in a plastic case try this
idea. Get a small pocket size AM broadcast band receiver (also with
plastic case) and place it next to the short wave receiver. Turn both
on and but leave the volume turned down on the BCB receiver. Tune in
a signal on the shortwave receiver. Then tune around on the BCB
receiver until you hear a beat note on the shortwave receiver. Once
this is done you should not have to touch the BCB receiver.

What I think is happening is that the leakage from the AM BCB receiver
IF on 455 kHZ is providing the BFO signal to the shortwave receiver.

Jim
N8EE

3115. Re: SIMPLE BFO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-22 17:57:24 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CC44F04.9DE15CC5@netscape.net>
Source record: 44557

JLB wrote:
>
> "marvin rosen" <raghead@worldnet.att.net> wrote in message
news:<Q4pw8.37853$Rw2.2848681@bgtnsc05-news.ops.worldnet.att.net>...
> > Is there such a "thing" as a "passive" bfo? i want to add an external bfo to
> > an am shortwave receiver. The only problem is i want a "batteryless" bfo or
> > a least one that takes a AA battery.
> >
> >
> > ---
> > Outgoing mail is certified Virus Free.
> > Checked by AVG anti-virus system (http://www.grisoft.com).
> > Version: 6.0.350 / Virus Database: 196 - Release Date: 4/17/02
>
> I have done this before, and it works:
>
> If you have a 'cheap' shortwave receiver in a plastic case try this
> idea. Get a small pocket size AM broadcast band receiver (also with
> plastic case) and place it next to the short wave receiver. Turn both
> on and but leave the volume turned down on the BCB receiver. Tune in
> a signal on the shortwave receiver. Then tune around on the BCB
> receiver until you hear a beat note on the shortwave receiver. Once
> this is done you should not have to touch the BCB receiver.
>
> What I think is happening is that the leakage from the AM BCB receiver
> IF on 455 kHZ is providing the BFO signal to the shortwave receiver.
>
> Jim
> N8EE

The radio doesn't generate much of a 455 kc signal unless a station is
tuned in. But along the same lines, by tuning around, you may find a
harmonic of the local oscillator that will correspond with the SW freq
and provide a beat note.
-Bill

3116. Re: Cleaning Variable Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-22 18:13:56 UTC
From: Anthony Bowyer <adb1x1@yahoo.com>
Message-ID: <096609dd68261a813859a5ec963feb81.77949@mygate.mailgate.org>
Source record: 44558

Marvin,
I have used the lemon juice method several times,
and it's worked well. (lemon juice in water,
boil it till it's squeaky clean)
I usually had to clean a vfo tuning capacitor because
the frequency would 'jitter' Mostly old Heathkits.
I found that after cleaning, a small amount of STP oil treatment
on the bearings would make it work like new.
Of course, you might not want to use STP if it's in
a tank cirucit somewhere!

Anthony

"marvin rosen" <raghead@worldnet.att.net> wrote in message
news:NUJw8.43639$QC1.3032472@bgtnsc04-news.ops.worldnet.att.net...

> Other than using a dishwasher or ultrasonic cleaner are there ways of
> cleaning very dirty variable capacitors?
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.350 / Virus Database: 196 - Release Date: 4/17/02

--
Posted via Mailgate.ORG Server - http://www.Mailgate.ORG

3117. DSP or analogic filter in RX app. What is the best ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-22 19:27:57 UTC
From: Rocco Tanucci <haganah_99@yahoo.com>
Message-ID: <1081173afa75df3b4693aae9eb7e724a.67469@mygate.mailgate.org>
Source record: 44559

Hi All,

I think that DSP filter in a receiver application it will never
beat the good analogic (mechanical or xtal filters) !!!!

In other words the DSP filter looks good in theory but when we
receive a weak signal very close to a strong signal the DSP goes
completely crazy (also with 24 bits ADC and 32 bits DSP !)

The solution is to use DSP only at AF and leave the good Collins
mechanical filter in the last IF.

This is why the most important HF transceiver HAM Manufacturing
Companies
released firstly a series of transceivers without the last analogic
filters but
then moved the DSP back to AF and restored the analogic filters !!!!

What do you think about it ???

Rocco

--
Posted via Mailgate.ORG Server - http://www.Mailgate.ORG

3118. Re: noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-22 19:27:59 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <3CC4643E.66B688B0@att.net>
Source record: 44560
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Robert, if you are interested in noise blankers, please refer to my recent posting in the Archives.

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!
QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

Robert John wrote:
>
> From my experience, Icom don't make noise blanker!

3119. MC1349 data help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-22 22:18:40 UTC
From: Mark Mansfield <mwmansfield@qwest.net>
Message-ID: <IT0x8.108$IH.81013@news.uswest.net>
Source record: 44563

Would anyone happen to have a MC1349 data sheet?
I've looked on the Motorola site without luck and on several vender sites
and came up with nothing.
If anyone has a copy of it, I'd be happy to pay copy and postage cost.
If someone has it in electronic format (or knows where I might find it) so
much the better.
Thanks!
Mark

3120. Re: noise blanker improvement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-22 22:23:33 UTC
From: J Yazel <jyazel@nls.net>
Message-ID: <7939cukp7odta867klj9m9ku0s7jud2ikc@4ax.com>
Source record: 44562
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Mon, 22 Apr 2002 19:27:59 GMT, "George, W5YR" <w5yr@att.net> wrote:

>Robert, if you are interested in noise blankers, please refer to my recent
>posting in the Archives.
>
>73/72/oo, George W5YR - the Yellow Rose of Texas
>Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
>Amateur Radio W5YR, in the 56th year and it just keeps getting better!
>QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
>Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437
> --

Hi George,

I'm not familiar with the "Archives".

How do I access them?

Thanks.

Jack W8RAG

3121. Re: SIMPLE BFO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-23 01:22:18 UTC
From: n2cqr@clix.pt
Message-ID: <3cc4b4f4.267847090@news.clix.pt>
Source record: 44561

On Sun, 21 Apr 2002 02:02:24 GMT, "marvin rosen"
<raghead@worldnet.att.net> wrote:

>Is there such a "thing" as a "passive" bfo? i want to add an external bfo to
>an am shortwave receiver. The only problem is i want a "batteryless" bfo or
>a least one that takes a AA battery.
I built one using two Altoid tins as a case. 9 v battery fit inside.
Duct tape holds the two tins together. Tuned circuit in the
oscillator used a 455 Khz transformer as the tuned circuit. I added a
small variable cap to tune. No need to connect internally to radio.
Just put the device near the radio and wrap the output wire from the
BFO around the telescoping antenna on the receiver. It works. Not
great, but you can listen to SSB where previously all you heard was
Donald Duck. Fun, simple HB project.

73 Bill CU2JL N2CQR http://planeta.clix.pt/n2cqr

3122. A sub-band for Homebrewers and Experimenters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-23 02:59:37 UTC
From: K0HB <KAYZEROHB@ELECTRICSMOKE.NET>
Message-ID: <t64x8.2486$iQ5.232163@newsread2.prod.itd.earthlink.net>
Source record: 44564
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

With the advent of restructuring and the end of new Novice licenses, the old Novice bands will have less and less reason to be set aside for that purpose. ARRL has recommended that they be disestablished and that the phone segments of those bands be increased, and FCC is requesting comments (the reference to the petition in "RM-10413").

Wouldn't this be a great opportunity to set up some sub-bands to showcase amateurs experimenting with new technologies? You can comment to FCC at their web site (http://gullfoss2.fcc.gov/prod/ecfs/upload_v2.cgi) or by mail.

Below are my comments.

Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of)
)
Amendment of Part 97 of the Commission's) RM-10413
Amateur Service Rules Governing)
Operating Privileges)
)

PERSONAL COMMENTS OF HANS BRAKOB, K0HB

OVERVIEW

These comments are in response to the ARRL proposal for "refarming" the existing HF "Novice sub-bands".

I. Discussion:

The ARRL petition does not address the implementation of new technologies as repeatedly requested by the Commission in WT Docket 98-143. It simply proposes to eliminate the Novice segments and reshuffle that spectrum among existing legacy modes. Rather than gain consensus, the ARRL polling method produced a popularity poll among several non-responsive (to 98-143) choices.

Rather than just "more of the same old stuff", I propose that the Commission take this opportunity to provide the Amateur Radio service with a new incentive to concentrate on paragraph 97.1(b) of the Commission's Rules.

97.1(b) Continuation and extension of the amateur's proven
ability to contribute to the advancement of the
radio art.

While I agree that the declining Novice license population
no longer justifies several significant chunks of spectrum
as a "reservation" for improving their Morse skills, and that
these "reservations" have outlived their regulatory purpose,
I propose that we retain these 50-year old "reservations" and
convert them to a new purpose which will ensure the future
Amateur Radio service continues our "proven ability to
contribute to the advancement".

II Proposal:

A. To "de-populate" the current Novice segments, I propose
that all Novice (and Technician with code credit) licensees
be authorized to use Morse code in the same band segments
now authorized for General class licensees.

B. I propose that the current Novice sub-bands be set aside
as a new "Experimental Reservation" for non-traditional
and experimental modes such as digitized voice, digitized
image, and other "forward looking" communications methods.

C. I propose that the current power output level of 200W
be retained for those segments, and additionally propose
that transmitters in those segments must be equipped with
auto-adaptive circuitry to reduce output to the lowest
level consistent with reliable communications.

D. I recommend that the Commission grant broad discretion
to amateurs operating in this "experimental reservation"
as to innovative modulation schemes and non-traditional
technologies.

Respectfully submitted,

H. Hans Brakob, K0HB
1610 Weston Lane
Plymouth, MN 55447-2855

3123. epiphyte

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-23 03:13:41 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3CC4D165.4845D177@visi.com>
Source record: 44565

Hi gang,
Anyone know if a kit for this ssb qrp rig is available anywhere?
Thanks
72 Bob WB0POQ

3124. Re: MC1349 data help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-23 05:08:12 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0204222108.76ec0c4b@posting.google.com>
Source record: 44566

"Mark Mansfield" <mwmansfield@qwest.net> wrote in message
news:<lT0x8.108$lH.81013@news.uswest.net>...
> Would anyone happen to have a MC1349 data sheet?
> I've looked on the Motorola site without luck and on several vender sites
> and came up with nothing.
> If anyone has a copy of it, I'd be happy to pay copy and postage cost.
> If someone has it in electronic format (or knows where I might find it) so
> much the better.
> Thanks!
> Mark

You do realize that it's practically identical to the MC1350? "The
MC1349P is an improved version of the MC1350P. Featuring higher gain,
a lower noise figure, and greater AGC range; in addition, an emitter
of the input amplifier is available for bypassing."

So the pinout is identical to the MC1350P, except for pin 3. Instead
of being a ground pin, you put a bypass capacitor there with the '49.

The MC1590 is the same circuitry as the MC1350P, though the pinouts
are not the same. I've never looked closely to see what real difference
in specs there are.

Michael VE2BVW

3125. TL442 data ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-23 05:57:48 UTC
From: la8ak.xnd@online.no
Message-ID: <3cc4de2d.121833279@news.online.no>
Source record: 44567

Would anyone happen to have a TL442 data sheet? Tried a google search,
but only got to a stupid page where several devices were listed
without any active information available

73,
LA8AK
--
remove ,xnd to reply

3126. Re: MC1349 data help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-23 05:57:48 UTC
From: la8ak.xnd@online.no
Message-ID: <3cc4e5e5.123809340@news.online.no>
Source record: 44568

On Mon, 22 Apr 2002 17:18:40 -0500, "Mark Mansfield"
<mwmansfield@qwest.net> wrote:

>Would anyone happen to have a MC1349 data sheet?
>I've looked on the Motorola site without luck and on several vender sites
>and came up with nothing.
>If anyone has a copy of it, I'd be happy to pay copy and postage cost.
>If someone has it in electronic format (or knows where I might find it) so
>much the better.
>Thanks!
>Mark
>
>
Believe I have data somewhere, might scan a few pages later. The
device was supposed to be an improvement over MC1350P for Video IF
applications, but the books only shows application with +15V operation

Today I would think that it would perfectly well operate on 12V
provided that Vcc1 is dropped to +9V, but you are not certain until
you have tried it.

Bought some devices 30 years ago, since I was advised that this was an
improved device over MC1350P, but never used them because of the
"limited" application data available from Motorola

73,
LA8AK
--
remove ,xnd to reply

3127. Re: epiphyte

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-23 06:20:46 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CC4FD3E.3FFF4C53@eznec.com>
Source record: 44569

A google web search for "epiphyte qrp" got a bunch of hits, including information about a kit from Far Circuits.

Roy Lewallen, W7EL

Bob Liesenfeld wrote:
>
> Hi gang,
> Anyone know if a kit for this ssb qrp rig is available anywhere?
> Thanks
> 72 Bob WB0POQ

3128. Ancient power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-23 11:03:36 UTC
From: jwodell@provide.net
Message-ID: <3cc53ddf.1237188@news.provide.net>
Source record: 44570

I have a Quezar power supply, circa 1975. The thing has driven me nuts for 27 years.

It started life as 4 2N3055 like power transistors, driven by a smaller power transistor that isn't made any more. The Darlington string works just fine. Big heat sinks.

But I have eternally had trouble getting the thing to work. Tried a 723, and it took off gloriously (ever see an HR-2 at 28 volts?), and yesterday tried a big zener, which is what was in there earlier. I just can't get enough current in the zener to keep the thing zenering at 10 amps.

My latest theory is that of using a LM 317 to drive that stuff.

It's a hefty beast, with a really big computer grade capacitor in it.

Anyone know of a good book on the design of such things? I have National Semiconductor application notes coming out my ears, and the ones in the Handbooks seem to have a lot of stuff that I don't need.

Please respond to jwodell@provide.net. Such a simple problem

Thanks, 73 jerry w8gnd

3129. Re: Ancient power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-23 11:18:46 UTC
From: "atec77(nospam)" <"atec77(nospam)"@hotmail.com>
Message-ID: <3cc54314$0$11452$afc38c87@news.optusnet.com.au>
Source record: 44571

use an lm 317k and a small pot , should do it.

"Jerry W. O'Dell" wrote:
>
> I have a Quezar power supply, circa 1975. The thing has driven
> me nuts for 27 years.
>
> It started life as 4 2N3055 like power transistors, driven by a
> smaller power transistor that isn't made any more. The Darlington
> string works just fine. Big heat sinks.
>
> But I have eternally had trouble getting the thing to work. Tried a
> 723, and it took off gloriously (ever see an HR-2 at 28 volts?), and
> yesterday tried a big zener, which is what was in there earlier. I
> just can't get enough current in the zener to keep the thing zenering
> at 10 amps.
>
> My latest theory is that of using a LM 317 to drive that stuff.
>
> It's a hefty beast, with a really big computer grade capacitor in it.
>
> Anyone know of a good book on the design of such things? I have
> National Semiconductor application notes coming out my ears, and
> the ones in the Handbooks seem to have a lot of stuff that I don't
> need.
>
> Please respond to jwodell@provide.net. Such a simple problem
>
> Thanks, 73 jerry w8gnd

3130. Re: Ancient power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-23 13:12:19 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <_5dx8.28301$DZ2.4930814@news6-win.server.ntlworld.com>
Source record: 44572

> I have a Quezar power supply, circa 1975. The thing has driven
> me nuts for 27 years.
>
> It started life as 4 2N3055 like power transistors, driven by a
> smaller power transistor that isn't made any more. The Darlington
> string works just fine. Big heat sinks.
>
> But I have eternally had trouble getting the thing to work. Tried a
> 723, and it took off gloriously (ever see an HR-2 at 28 volts?), and
> yesterday tried a big zener, which is what was in there earlier. I
> just can't get enough current in the zener to keep the thing zenering
> at 10 amps.
>
> My latest theory is that of using a LM 317 to drive that stuff.
>
> It's a hefty beast, with a really big computer grade capacitor in it.
>
> Anyone know of a good book on the design of such things? I have
> National Semiconductor application notes coming out my ears, and
> the ones in the Handbooks seem to have a lot of stuff that I don't
> need.
========
Having an ARRL handbook 1995 ,there is a circuit diagramme for a 28 V PSU
with 4 pcs 2N3055 in parallel ,driven by another 2N3055 which in turn is
driven by a 723 IC . This IC is fed via a LM317L.
You'll find it in chapter 11 , page 11.40
I am sure the circuit diagramme will also be in other ARRL Handbooks around
that year.

The circuit is obviously suitable for 13.8 V output or 50 V for that matter.
If you build / modify your PSU in accordance with this circuit diagramme ,
I can't
believe you will have any problems.

Good Luck

Frank gm0csz.kn6wh@ntlworld.com

3131. Re: SIMPLE BFO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-23 13:17:44 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0204230517.143a624f@posting.google.com>
Source record: 44573

[snipped]

".Bill :-)" <TheRealExray@netscape.net> wrote in message
news:<3CC44F04.9DE15CC5@netscape.net>...

>
> The radio doesn't generate much of a 455 kc signal unless a station is
> tuned in. But along the same lines, by tuning around, you may find a
> harmonic of the local oscillator that will correspond with the SW freq
> and provide a beat note.
> -Bill

Well, of course. That's why I said you had to tune around on the BCB
receiver, and once it was set you didn't have to touch it. If you
used a harmonic of the local oscillator you would have to keep
fiddling with it as you tuned the shortwave receiver.

There has to be a strong BCB station in the area for this to work, but
it does work.

Jim
N8EE

3132. HB Amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-23 17:32:28 UTC
From: KU4YP <ku4yp@earthlink.net>
Message-ID: <MUgx8.750$607.64561@newsread1.prod.itd.earthlink.net>
Source record: 44574

hello,

is there anyone who has built a HB Amp for 10 meters? i have one of
those monoband rigs for 10 and 4 6146s and was thinking of building a amp.
not looking for a Kw, just about 200-500 watts. do not want to "work all
neighbors" hihi.

--
73 de KU4YP "There is no spoon........."
Mike Prevatt
Willow Oak, Florida
Amateur Radio Operator
Active HF/VHF/UHF/Digital/QRP
Homepage: http://home.earthlink.net/~ku4yp

3133. Re: HB Amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-23 18:35:21 UTC
From: Walter <walter@accessus.net>
Message-ID: <JPhx8.163070$%l3.13130703@bin8.nnrp.aus1.giganews.com>
Source record: 44575

Hi Mike, I have not built one, and the only reference that
is in the shack is the ARRL handbook for 1966 (43rd)
edition, page 190-193, has a 200 watt general purpose
amp using two 6146B's that covers 3.5 thru 28 MHz.

You could eliminate the multiband components and use
the 10 meter. The power transformer is 6.3v at 5 amps,
and 800 v.c.t. at 250 ma. Not sure the output filtering
is up to current standards so you might want to do some
calculating!

Happy building, 73, Walter, AG5P

"KU4YP" <ku4yp@earthlink.net> wrote in message
news:MUgx8.750$607.64561@newsread1.prod.itd.earthlink.net...
> hello,
>
> is there anyone who has built a HB Amp for 10 meters? i have one
of
> those monoband rigs for 10 and 4 6146s and was thinking of building
a amp.
> not looking for a Kw, just about 200-500 watts. do not want to "work
all
> neighbors" hihi.
>
> --
> 73 de KU4YP "There is no spoon........."
> Mike Prevatt
> Willow Oak, Florida
> Amateur Radio Operator
> Active HF/VHF/UHF/Digital/QRP
> Homepage: http://home.earthlink.net/~ku4yp
>
>
>

3134. WTB: Xtals for IC-215

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-23 19:03:00 UTC
From: Igor <nobody@novalid.com>
Message-ID: <1019588529.237141@rnewsr2.es.tisadm.net>
Source record: 44576

Hello

I want to buy quartz Xtals for an ICOM IC-215, 145 MHz band. Simplex or repeater channels.

Thanks

73, Juan frog7@inicia.esXXX (Please remove the X)

3135. G3JIR - URL? for technical info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-23 23:02:55 UTC
From: la8ak.xnd@online.no
Message-ID: <3cc5e74e.189716551@news.online.no>
Source record: 44577

searched http://www.users.rapid.net.uk/enid/g3jir/crystal.htm -
perhaps it is moved, any info?

73
LA8AK
--
remove ,xnd to reply

3136. Component identification site?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-24 01:15:39 UTC
From: Offbreed@my-deja.com
Message-ID: <d3d158d1.0204231715.4bbef0b1@posting.google.com>
Source record: 44578

Anyone have a favorite online parts identification site? I'd like to bookmark one for reference.

3137. Re: TL442 data ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-24 06:49:45 UTC
From: Lionel Booth <l.s.booth@worldnet.att.net>
Message-ID: <dAsx8.43153$Rw2.3342783@bgtnsc05-news.ops.worldnet.att.net>
Source record: 44579

This is also known as a SN76514 and was used as a DBM in the Sartori mods for the R4C. I may have a pin out for the dip package if that will help. I looked for a TI linear book on the shelf but don't have the mfg info. Fairchild or Motorola may have also made the 76514.

n5lb@arrl.net

J M Noeding <la8ak.xnd@online.no> wrote in message news:3cc4de2d.121833279@news.online.no...
> Would anyone happen to have a TL442 data sheet? Tried a google search,
> but only got to a stupid page where several devices were listed
> without any active information available
>
> 73,
> LA8AK
> --
> remove ,xnd to reply

3138. Fluke 73 for sell

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-24 07:22:11 UTC
From: mainframe <mainframe@tfalut.com>
Message-ID: <s9nccuo8v88t255mg0u53affbb2d3f5873@4ax.com>
Source record: 44580

nice meter, $45.00 shipped ,
walkndude2002 at yahoo.com
drop the at and add @ to email

3139. Re: Help Please

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-24 08:46:26 UTC
From: "atec77(nospam)" <"atec77(nospam)"@hotmail.com>
Message-ID: <3cc670dd$0$11451$afc38c87@news.optusnet.com.au>
Source record: 44581

do us a favour . piss orf

Help Please wrote:
>
> The program of the mercy stock "Mercy and Mutual Aid" about the
> financial help for the building of the medicative body for the
> tuberculosis convicts.
> In resent years in the foundation of criminal corrective system in
> Russia, particularly in the Chelyabinsk region, is extremely
> unfortunate background around tuberculosis. The tuberculosis morbidity
> among the convicts for last 10 (1991-2000) years increased in 13 times
> and is 3251 people for 100000, in 2000 year, exceeding analogical
> index among the population in 41 times.
> (79 per 1000000). In 05.04.01 in the foundations of criminal
> corrective system of our region are 3088 tuberculosis morbidity,
> particularly with active forms - 1699, nowadays 4,9 per cent of all
> convicts of the region need isolation.
> The interregion tuberculosis hospital is the one in our region where a
> high-qualified assistance is allowed. Nowadays here are hospitalized
> less than a half of needy persons. But this hospital is in a limit of
> all its resourced, and cease to be a centre of the organize methodical
> activity of the region calibre. The sanitary norms of the allocation
> patients: for 1 patient is 1,2x1.2 m. instead of 5x5 m. This
> constructs extra difficulties in the municipal provision, it leads to
> the violation sanitary epidemiological regime, forms the facilities
> for reinfection of patients and contamination our specialists.
> In 1998 the building of the new body was begun. It would consists of
> 150 positions (rooms).
> The cost of this building is 370000 dollars of USA. But there are only
> 60000 dollars of USA.
> Nowadays the finance from the Federal and Local budget could not be
> for the absence of money. But we hope for your help. We believe in
> your mercy and God is with us. All the financial help will help us to
> build new hospital. It lets us to improve sanitary hygienic
> maintenance, to supply a new degree of treatment for our patients.
> Dear Friends! We need your help. For each of you we will set fire on
> the candles in the churches. The god stores all of you!
>
> Thank you. The chairman of the stock V. Kravtsov.
>
> WWW: http://fund.sgr.ru
>
> Your money enumerate by electronic payment on our account:
>

> USD:
>
> JP MORGAN CHASE BANK, N.A.
> 4 CHASE METROTECH CENTER, BROOKLIN, NEW YORK 11245,USA.
> SWIFT: CHASUS33
>
> account ¹ 001-1-907425 with CHELYABINVESTBANK, Chelyabinsk, Russia,
> SWIFT: CHINRU4C,
>
> in favour of account ¹ 30109840400680000006,
> JSC "URICOM-BANK", Chelyabinsk, Russia
>
> BENEFICIARY
>
> account ¹ 40602840900007000212
> Charitable Fund of "Mutual aid and Mercy"
>
> DETAILS OF PAYMENT :
>
> "CHARITY DONATION".
>
> EURO:
>
> COMMERZBANK AG,
> 60261 FRANKFURT AM MAIN, GERMANY,
> SWIFT: COBADEFF
>
> account ¹ 400887199800EUR with CHELYABINVESTBANK, Chelyabinsk, Russia,
> SWIFT: CHINRU4C
>
> in favour of account ¹ 30109978000680000006
> JSC "URICOM-BANK", Chelyabinsk, Russia.
>
> BENEFICIARY
>
> account ¹ 40602840900007000212
> Charitable Fund of "Mutual aid and Mercy"
>
> DETAILS OF PAYMENT :
>
> "CHARITY DONATION "[Image]

3140. NEED: Schematic for Mirage MP-X Wattmeter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-24 13:23:14 UTC
From: SAM <xxscottm@xxnetcommander.comxx>
Message-ID: <6lyx8.75703$ro5.6494828@bin6.nnrp.aus1.giganews.com>
Source record: 44582

Looking for the schematic for the main board for the MP line of wattmeters
by Mirage. It can be any one of the MP-1, MP-2, or MP-3. I believe the
main board is all the came for these.

Thanks,
Scott M.

3141. Re: Ancient power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-24 18:09:16 UTC
From: la8ak.xnd@online.no
Message-ID: <3cc5e857.189981292@news.online.no>
Source record: 44583

On Tue, 23 Apr 2002 14:12:19 +0100, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>
>> I have a Quezar power supply, circa 1975. The thing has driven
>> me nuts for 27 years.
>>
I built a PSU using MC1469G and a PNP power transistor in 1970. Blow
the device in an experiment in 1995. Couldn't find similar IC, so I
hade to use the second best device - MC1723

73
LA8AK
--
remove ,xnd to reply

3142. Re: TL442 data ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-24 23:08:51 UTC
From: la8ak.xnd@online.no
Message-ID: <3cc71dad.269182913@news.online.no>
Source record: 44584

On Wed, 24 Apr 2002 06:49:45 GMT, "Lionel Booth"
<l.s.booth@worldnet.att.net> wrote:

>This is also known as a SN76514 and was used as a DBM in the Sartori mods
>for the R4C. I may have a pin out for the dip package if that will help. I
>looked for a TI linear book on the shelf but don't have the mfg info.
>Fairchild or Motorola may have also made the 76514.
>
>n5lb@arrl.net
>
Lionel

have a vague impression of the 76514, do you mean they are equal? It
was some integrated 600 ohm resistors limiting the use, so I preferred
MC1496/1596 DIL devices. I have Sartori mods, maybe the reason for
buying it on the first hand...

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

3143. Re: TL442 data ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-24 23:17:48 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CC73D47.6924@pop.removethistomailme.net>
Source record: 44585

J M Noeding wrote:
>
> On Wed, 24 Apr 2002 06:49:45 GMT, "Lionel Booth"
> <l.s.booth@worldnet.att.net> wrote:
>
> >This is also known as a SN76514 and was used as a DBM in the Sartori mods
> >for the R4C. I may have a pin out for the dip package if that will help. I
> >looked for a TI linear book on the shelf but don't have the mfg info.
> >Fairchild or Motorola may have also made the 76514.
> >
> >n5lb@arrl.net
> >
> Lionel
>
> have a vague impression of the 76514, do you mean they are equal? It
> was some integrated 600 ohm resistors limiting the use, so I preferred
> MC1496/1596 DIL devices. I have Sartori mods, maybe the reason for
> buying it on the first hand...

The TL442 and SN76514 are the same part. I don't have a source for the data sheet (maybe someone has a ww.freetradezone.com subscription?), but there's a lot of applications info in "Solid State Design for the Radio Amateur."

I'm about to use one in a receiver project for the first time in several years. They are out of production, but I was able to order 10 of them from Rochester Electronics under the SN76514 part number just a couple of weeks ago.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3144. Ping - maxpowa

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-25 00:17:46 UTC
From: Gollywog <_eng@ilos.net>
Message-ID: <KWHx8.20808$1u2.637794@news1.calgary.shaw.ca>
Source record: 44586
Cross-posted to: rec.radio.amateur.homebrew,comp.robotics.misc,sci.electronics.components,sci.electronics.misc

In article <Bdiq8.44473$DE4.6016@afrodite.telenet-ops.be>, "maxpowa"
<maxpowa@iwontellsorry.com> wrote:

>"Gollywog" <_eng@ilos.net> schreef in bericht
>news:ud5p8.232019$kb.13109030@news1.calgary.shaw.ca...
>>
>> Anybody:
>>
>> What's up with Dan's Small Parts? I'm sitting on an order, waiting for
the
>> monthly change of catalog he mentions at http://www.fix.net/dans.html and
<snip>

>I ordered from dan's 3 weeks ago myself, first time I ordered from him,
have
>been anoyed the last week, running to the mailbox every day, because I'm
>waiting for some stuff, and 3 weeks is to long, how the hell can it take
>someone 3 weeks to put some bags in a box, label it and put it in the mail.
<snip>

I'm still sitting on my order. The money order is getting stale. This would
be about week 5 for you right? Any sign of the parts?

Thanks,
Mike

********* \\\\lll//// *********
********** \ -- -- / **********
*********** (\@ @/) ***********
*** --oOOOo---(_)---oOOOo-- ***
Real men edit the registry.

3145. Re: Higher IP3 for MC1496, SO42P, TL442, SN76514N, NE/SA602 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-25 02:24:43 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3CC76850.23EB9EB2@clifto.com>
Source record: 44587

J M Noeding wrote:
> Just read the interesting notes for improving IP3 of MC1496 from the
> usual -20dBm towards +20dBm by Ian Briathwaite in Radcom TT Apr. 98,
> also shown in Technical topics scrapbook, and the following notes by
> G3RZP on SL6440. As alternative Gilbert cell mixer G4COL suggest to
> use 2x CA3046 (=3086?) with IP3 of over +20dBm.

Is any of this on line anywhere?

--
If spammers weren't stupid, they'd be the idle rich instead of spammers.
- Morely Dotes

3146. ARD Software Pukes & Dies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-25 04:54:15 UTC
From: K0HB <KAYZEROHB@ELECTRICSMOKE.NET>
Message-ID: <XZLx8.2890$8p3.269777@newsread1.prod.itd.earthlink.net>
Source record: 44588

I pulled my old ARRL Radio Designer software (V1.0) out tonight to run some simulations. I think the last time I ran it was on Win 3.11 or some such ancient OS. Pukes and dies on Win 98.

Anybody here running it on Win 98? How'd you do it?

73, Hans, K0HB

3147. VFO using ceramic filters on 5.5, 6 and 10.7MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-25 07:12:38 UTC
From: la8ak.xnd@online.no
Message-ID: <3cc7411a.278253248@news.online.no>
Source record: 44589

Made some experiments with a circuit which seems to have few problems.
Earlier tried some published circuits which didn't work at all. It is
always a problem that amateur constructions may not be reproducible,
but my circuit has been tested and is used in production at a nearby
factory who needed a simple VCO. So it is at least tested by two
persons with success.

Transistor is 2N3904 or better, a HF type like MPS918, 2N2369 or other

If you are interested I can mail you the circuit and text as two gif
files (max 47kB)

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

3148. Re: ARD Software Pukes & Dies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-25 07:28:35 UTC
From: Isacc Newman <someone@microsoft.com>
Message-ID: <aa8b5d$j4g$1@newstoo.ericsson.se>
Source record: 44590

Common problem. I have the same with PCB design software designed to run under DOS. Worked Ok with Windoze 3.11 but as soon as I shoved in 98 and a graphic card, all the text looks like something Dr. Spock would write.

My solution 1 - software - try starting the computer with DOS, then run WIN.EXE in your WINDOZE3 directory. I have copied all the Win3.11 files to another windoze directory and can start either.

My solution 2 - Keep an old 486 Win3.11 computer aside for this sort of thing.

I do both!

BR IN

K0HB wrote in message ...
>I pulled my old ARRL Radio Designer software (V1.0) out tonight to run some
>simulations. I think the last time I ran it was on Win 3.11 or some such
>ancient OS. Pukes and dies on Win 98.
>
>Anybody here running it on Win 98? How'd you do it?
>
>73, Hans, K0HB
>
>
>
>
>
>

3149. Re: Ping - maxpowa

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-25 10:23:07 UTC
From: maxpowa <maxpowa@iwontellsorry.com>
Message-ID: <fOQx8.38608$Ze.6538@afrodite.telenet-ops.be>
Source record: 44591

"Gollywog" <_eng@ilos.net> schreef in bericht
news:KWHx8.20808$1u2.637794@news1.calgary.shaw.ca...
<snip>
>
> I'm still sitting on my order. The money order is getting stale. This
would
> be about week 5 for you right? Any sign of the parts?
>
> Thanks,
> Mike
>
> ********* \\\\lll//// *********
> ********** \ -- -- / **********
> *********** (\@ @/) ***********
> *** --oOOOo---(_)---oOOOo-- ***
> Real men edit the registry.
>

It will be 7 weeks tomorrow, someone mentioned it took up to 2 months, if the goods aren't here friday next week, I'm gonna try to contact the guy, if I don't get a reply, I'm filling a complaint at the postal office, so they can get my money back. Every day that passes I find it harder to believe the US postal service is to blame, neither do I believe the package would be sitting at our customs, not for this long.

Steven

3150. Re: VFO using ceramic filters on 5.5, 6 and 10.7MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-25 12:20:38 UTC
From: joshua <ita@email.hinet.hr>
Message-ID: <aa8seh$3dk7$1@as201.hinet.hr>
Source record: 44592

HI JAN !!!I M very interesting for that ,please send me and i would please
you if you have some good projects of pll s ,synthesizer s and vco s
(130-160 mhz approx.) or if you now some good web-sites !!!73 de
9a3xz-mladen-croatia !!!
J M Noeding wrote in message <3cc7411a.278253248@news.online.no>...
>Made some experiments with a circuit which seems to have few problems.
>Earlier tried some published circuits which didn't work at all. It is
>always a problem that amateur constructions may not be reproducible,
>but my circuit has been tested and is used in production at a nearby
>factory who needed a simple VCO. So it is at least tested by two
>persons with success.
>
>Transistor is 2N3904 or better, a HF type like MPS918, 2N2369 or other
>
>If you are interested I can mail you the circuit and text as two gif
>files (max 47kB)
>
>73
>Jan-Martin
>LA8AK
>--
>remove ,xnd to reply

3151. Re: Higher IP3 for MC1496, SO42P, TL442, SN76514N, NE/SA602 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-25 14:04:19 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aa92d2ndg1@helle.btinternet.com>
Source record: 44593

The MC1496 is far-and-away the best doubled-balanced modulator integrated circuit (or receiving demodulator) ever invented. It's common sense.

I have no wish to get involved with argumentative, ill-educated nit-wits who think they know better.

Reg, G4FGQ.

3152. Re: Ping - maxpowa

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-25 15:25:15 UTC
From: msbob <msbob@hotmail.com-edy>
Message-ID: <3CC81FDB.D6FDF401@hotmail.com-edy>
Source record: 44594

maxpowa wrote:
>
> "Gollywog" <_eng@ilos.net> schreef in bericht
> news:KWHx8.20808$1u2.637794@news1.calgary.shaw.ca...
> <snip>
> >
> > I'm still sitting on my order. The money order is getting stale. This
> would
> > be about week 5 for you right? Any sign of the parts?

I don't know if you noticed, but Dan's Small Parts and Kits web site was updated on 04-09-2002 (that would be April 9, 2002 for international readers).
<http://www.fix.net/dans.html>

3153. How does a noise canceller work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-25 16:32:56 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0204250832.b5144c5@posting.google.com>
Source record: 44595
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

There are several noise canceller products on the market, such as the MFJ-1025 and MFJ-1026.

http://www.mfjenterprises.com/products.php?prodid=MFJ-1025

http://www.mfjenterprises.com/products.php?prodid=MFJ-1026

Both of these products are said to have the ability to remove local AND DX noise sources. This would be a miracle on the lower bands on summer nights, when distant lightning strikes wreak havoc on the bands.

From what I understand, it connects to a signal antenna (your regular transmit antenna) and a noise antenna (a second antenna). The signal antenna picks up the weak signal and the noise. The noise antenna just picks up the noise. You amplify the noise from the noise antenna so that it is the same intensity as the noise from the signal antenna. You adjust the phase of the noise from the noise antenna so that it is 180 degrees out of phase with the noise from the signal antenna. The received RF from the signal and the noise antennas is added, the out-of-phase-noise components cancel out, and only the RF signal reaches the receiver.

The BIG question: Why doesn't the noise antenna receive some of the signal as well as the noise? Even if the noise antenna is much less efficient than the regular signal antenna, wouldn't this diminish the noise received as well as the signal received?

Jason Hsu, AG4DG
usenet@@@jasonhsu.com
http://www.jasonhsu.com/ham_radio-technical.html

3154. Re: Ancient power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-25 16:55:50 UTC
From: "Alexander S. Wood" <alec_wood@nospamplease.ntlworld.com>
Message-ID: <dAWx8.3114$ry2.377402@news6-win.server.ntlworld.com>
Source record: 44596

"Jerry W. O'Dell" <jwodell@provide.net> wrote in message
news:3cc53ddf.1237188@news.provide.net...
> I have a Quezar power supply, circa 1975. The thing has driven
> me nuts for 27 years.
>
<snip>

Hi Jerry

For a cheap and cheerful input, take an ordinary 7812 1A regulator and put 4
of any silicon diodes between it's ground pin and ground. This will give you
about
14.8V on the input to the Darlington chain and thus about 13.4V out

Very reliable, much more so than a pot. You may need a small heatsink on the
7812
but I doubt it.

Good luck

Alec Wood M1BNK

3155. Re: How does a noise canceller work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-25 17:43:48 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CC84054.B1440996@netscape.net>
Source record: 44497
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Jason Hsu wrote:
>

> The BIG question: Why doesn't the noise antenna receive some of the
> signal as well as the noise? Even if the noise antenna is much less
> efficient than the regular signal antenna, wouldn't this diminish the
> noise received as well as the signal received?
>
> Jason Hsu, AG4DG
> usenet@@@jasonhsu.com
> http://www.jasonhsu.com/ham_radio-technical.html

My understanding is that there is a difference in phase between the
desired signal and that of the noise given their different source
locations. That gadget can be tuned for either one. MFJ explains it
pretty well....
http://www.mfjenterprises.com/man/pdf/MFJ-1026.pdf

3156. Equivalent of SJE1462

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-25 17:49:39 UTC
From: Robin Birch <robin@ruffnready.co.uk>
Message-ID: <UONPuRAzGEy8EwaQ@falstaf.demon.co.uk>
Source record: 44498

Hi,
Can anyone give me an equivalent for, or device parameters of, an
SJE1462 and SJE1461. These are NPN and PNP bipolar power transistors.

Regards

Robin Birch

3157. Re: How does a noise canceller work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-25 18:50:01 UTC
From: w4pqwhs@aol.com
Message-ID: <20020425145001.28309.00005109@mb-ms.aol.com>
Source record: 44499

Jason, most of these devices work on a very basic principal, Two signals 180 degrees out of phase of equal amplitude will cancel each other..This noise on your receiver is a broad signal riding on the wanted signal, by picking up this noise on another antenna,running it through a seperate receiver, adjusting the amplitude and phase , it will cancel the noise. before it gets to your receiver. on most noises they work pretty good, requires a bit of practice to get it right,also the interference must be steady for the noise cancellor to really be effective...73 Harold W4PQW

3158. Re: Equivalent of SJE1462

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-25 19:01:39 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CC85293.8BC5E10B@netscape.net>
Source record: 44500

Robin Birch wrote:
>
> Hi,
> Can anyone give me an equivalent for, or device parameters of, an
> SJE1462 and SJE1461. These are NPN and PNP bipolar power transistors.
>
> Regards
>
> Robin Birch

Does this look right?
http://www.nteinc.com/specs/100to199/NTE186.html
I found these searching *1461

-Bill

3159. Re: ARD Software Pukes & Dies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-25 19:31:12 UTC
From: Bob Liesenfeld <robert.liesenfeld@neicoltech.org>
Message-ID: <3CC85980.C07F78F@neicoltech.org>
Source record: 44501

K0HB wrote:

> I pulled my old ARRL Radio Designer software (V1.0) out tonight to run some
> simulations. I think the last time I ran it was on Win 3.11 or some such
> ancient OS. Pukes and dies on Win 98.
>
> Anybody here running it on Win 98? How'd you do it?
>
>

I'm running Win98 SE and simply installed the program from the floppies.
Works ok for me.

Bob WB0POQ

3160. Reducing PLL noise - active noise cancelling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-26 00:51:10 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3cc8a2b3$0$11736@echo-01.iinet.net.au>
Source record: 44502

There were some posts in this NG about using an active noise cancelling scheme to reduce the noise output in power regulators (Wenzel).
Is it possible to apply this scheme to a PLL loop filter?
I guess the problem would be bandwidth - obviously there would have to be a low pass effect to allow the PLL error voltage past - still it should be possible to reduce the contribution from phase detector noise which is dominant within the loop bandwidth.
Anyone got any excperience of this?

Richard

3161. Re: relay that can handle 100 watts?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-26 01:46:43 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3cc8afd4.11076026@news.peakpeak.com>
Source record: 44503
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Look for a relay where:

- The moving contact isn't connected with wire (low stray inductance), and

- The moving contact is isolated from the magnetic armature (low stray capcitance).

The Potter-Brumfield "RK" series is a good example. Its leaf spring contacts have low inductance and are well separated from the armature metal. Their T90 series is not, because the moving contact is mounted directly to the iron aramture.

Other manufacturers have similar parts. Go to the surplus store and have a look at the goods before buying.

--KR0U

On Mon, 22 Apr 2002 06:29:33 -0400, "AB Brown" <abbrownnospam@mail.com> wrote:

>I'm looking for the manufacturer's part numbers (Mouser, Digi-Key, etc) for
>a DPDT or 3PDT 12 Vdc relay that can handle 100 watts RF at HF. The purpose
>will be to switch out a preamp on transmit. If specific part numbers aren't
>available, what relay characteristics should I look for?
>
>Thanks,
>AB
>
>

-- Tim Groat

To reply by e-mail, change the quoted words to the corresponding punctuation marks.

3162. Re: ARD Software Pukes & Dies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-26 02:29:59 UTC
From: K0HB <KAYZEROHB@ELECTRICSMOKE.NET>
Message-ID: <HY2y8.5162$iU4.424113@newsread2.prod.itd.earthlink.net>
Source record: 44504
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.policy

"Bob Liesenfeld" <robert.liesenfeld@neicoltech.org> wrote in message
news:3CC85980.C07F78F@neicoltech.org...

>
> I'm running Win98 SE and simply installed the program from the floppies.
> Works ok for me.
>
> Bob WB0POQ

Now I'm really cornfused! Here's what W1RFI sent me from ARRL....

Hi, Hans,

I checked into this a bit at work today. Apparently Compact software had
been sold to Ansoft. Ansoft chose not to continue to support ARD, probably
because they felt it competed with their present product line. The program
does not run on 95 and 98 because it would need to be recompiled. ARRL does
not own the rights, but had sold it under a licensing agreement.

Ansoft does have a freeware student version that does most of the things
that
ARD used to do.

For info, see:

http://www.arrl.org/ard/

73,
Ed, W1RFI

3163. Manual & Schematic needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-26 02:43:48 UTC
From: K0HB <KAYZEROHB@ELECTRICSMOKE.NET>
Message-ID: <E93y8.5195$iU4.427987@newsread2.prod.itd.earthlink.net>
Source record: 44505
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

I have a Techtronix 2213 Dual-Trace 60MHz scope which just lost a couple of ranges.

Anyone got a schematic?

de Hans, K0HB

k0hb at arrl.net

3164. Re: ARD Software Pukes & Dies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-26 03:59:29 UTC
From: Jon Bloom <jbloom@arrl.org>
Message-ID: <pan.2002.04.25.23.59.22.521433.12791@arrl.org>
Source record: 44506
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.policy

On Thu, 25 Apr 2002 22:29:59 -0400, K0HB wrote:
>
> "Bob Liesenfeld" <robert.liesenfeld@neicoltech.org> wrote in message
> news:3CC85980.C07F78F@neicoltech.org...
>
>>
>> I'm running Win98 SE and simply installed the program from the floppies.
>> Works ok for me.
>>
>> Bob WB0POQ
>
> Now I'm really cornfused! Here's what W1RFI sent me from ARRL....
>
> ----------
>
> Hi, Hans,
>
> I checked into this a bit at work today. Apparently Compact software had
> been sold to Ansoft. Ansoft chose not to continue to support ARD, probably
> because they felt it competed with their present product line. The program
> does not run on 95 and 98 because it would need to be recompiled. ARRL does
> not own the rights, but had sold it under a licensing agreement.

Ed doesn't have it _quite_ right. ARD runs on some W98 systems but not on others. It's a 16-bit Windows (3.1) program that its manufacturer was uninterested in maintaining it as newer versions of Windows came out. (What, you thought Windows was really backward compatible with older versions? :-) So, if it runs on your machine running Win98, great! But it may not.

Serenade SV (see the URL Ed cited, below) is probably your best alternative.

> Ansoft does have a freeware student version that does most of the things
> that
> ARD used to do.
>
> For info, see:
>
> http://www.arrl.org/ard/
>
> 73,
> Ed, W1RFI

3165. Re: TL442 data ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-26 04:08:32 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0204252008.345b2f36@posting.google.com>
Source record: 44507

la8ak.xnd@online.no (J M Noeding) wrote in message
news:<3cc71dad.269182913@news.online.no>...Ve
> On Wed, 24 Apr 2002 06:49:45 GMT, "Lionel Booth"
> <l.s.booth@worldnet.att.net> wrote:
>
> >This is also known as a SN76514 and was used as a DBM in the Sartori mods
> >for the R4C. I may have a pin out for the dip package if that will help. I
> >looked for a TI linear book on the shelf but don't have the mfg info.
> >Fairchild or Motorola may have also made the 76514.
> >
> >n5lb@arrl.net
> >
> Lionel
>
> have a vague impression of the 76514, do you mean they are equal? It
> was some integrated 600 ohm resistors limiting the use, so I preferred
> MC1496/1596 DIL devices. I have Sartori mods, maybe the reason for
> buying it on the first hand...
>
> 73
> Jan-Martin
> LA8AK

They are the same IC. I think Texas Instrument was changing their
numbering scheme around the time the IC came out, which is why
two very different numbers reference the same IC.

I've never seen a data sheet for the device. As I've said before,
even when it was being made, it wasn't a commonly available part.

It was my impression that when people used it, it was because
it needed few external components, compared to the
MC1496. Certainly, the articles I've seen that use it, only
mention the simple circuit. Peter Bertini, though, once said it had
better signal handling capability. I was never sure if that was a guess,
or if he'd seen the data sheet.

To reference your other thread, I've wondered a bit about biasing.
One might think there is a limit due to the transistors used in
the MC1496.

Doug DeMaw wrote one or two articles about using an RCA transistor
array, or maybe it was a dual differencial amplifier, for a double
balanced mixer like the MC1496. I don't think he ever said why
he didn't use the 1496. This would have been about 1974, and he
was modifying a direct conversion QRP rig, maybe a Heathkit. I

think "Solid State for the Radio Amateur" has something along these lines.

I've thought about building up one using just discrete transistors. After all, hams got by without ICs for decades. It would certainly be easier than finding a transistor array.

I did a search for the TL442 data sheet the other day, and like you, found nothing. However, I did find an intriguing page by someone playing around with Gilbert Cell mixers using discrete transistors. I've only glanced at it, but it might be of interest: http://www.intio.or.jp/jf10zl/gil.htm

Michael VE2BVW

3166. Re: TL442 data ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-26 04:25:32 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CC8D6BC.86328F67@eznec.com>
Source record: 44508

Years ago, I was investigating the possibility of using an MC1496 for an application it wasn't intended for. I got samples from a number of manufacturers, opened up the cans or had the plastic packages dissolved, and took a good look at the dice. I found that there were at least three, very different, chips being sold under that part number. Some inherently didn't have really good balance because of unsymmetrical crossovers and the like. The signal handling and transistor dissipation capability would also have been very different because the transistors differed widely in size among the various chips.

About a year after I did the investigation (and decided not to use the part), I got a call from the company's component group asking for the unpackaged chips I had. Seems that one or more of the suppliers had changed the layout in a way that caused it to quit working in one of our products.

The moral is that no matter how much you learn about one manufacturer's part, you still don't know about the others. And you don't know what even that manufacturer's future pars will do. If you're only building one or two units, no problem -- just design them around the parts you have on hand. But if you're using the chip in an unconventional or unspecified way, don't count on anyone being able to duplicate it.

Roy Lewallen, W7EL

3167. Re: Manual & Schematic needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-26 08:45:23 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CC913B7.6B61@pop.removethistomailme.net>
Source record: 44509
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

K0HB wrote:
>
> I have a Techtronix 2213 Dual-Trace 60MHz scope which just lost a couple of
> ranges.
>
> Anyone got a schematic?
>
> de Hans, K0HB
>
> k0hb at arrl.net

Search on the correct spelling (Tektronix) and you'll likely have better luck. Besides eBay, have a look at the manual resources listed at http://www.reprise.com/host/tektronix/home/default.asp. This is not a particularly rare bird, so it shouldn't be too tough to come up with a manual for it.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3168. Re: ARD Software Pukes & Dies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-26 09:46:21 UTC
From: k9wkj <k9wkj@hotmail.com>
Message-ID: <Abay8.983$eV4.37271@reggie.win.bright.net>
Source record: 44510
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.policy

does this have anything todo with the user choosen FAT32 file system maybe
they only run on FAT16??
Jon Bloom <jbloom@arrl.org> wrote in message
news:pan.2002.04.25.23.59.22.521433.12791@arrl.org...
> On Thu, 25 Apr 2002 22:29:59 -0400, K0HB wrote:
> >
> > "Bob Liesenfeld" <robert.liesenfeld@neicoltech.org> wrote in message
> > news:3CC85980.C07F78F@neicoltech.org...
> >
> >>
> >> I'm running Win98 SE and simply installed the program from the
floppies.
> >> Works ok for me.
> >>
> >> Bob WB0POQ
> >
> > Now I'm really cornfused! Here's what W1RFI sent me from ARRL....
> >
> > ----------
> >
> > Hi, Hans,
> >
> > I checked into this a bit at work today. Apparently Compact software
had
> > been sold to Ansoft. Ansoft chose not to continue to support ARD,
probably
> > because they felt it competed with their present product line. The
program
> > does not run on 95 and 98 because it would need to be recompiled. ARRL
does
> > not own the rights, but had sold it under a licensing agreement.
>
> Ed doesn't have it _quite_ right. ARD runs on some W98 systems but not on
> others. It's a 16-bit Windows (3.1) program that its manufacturer was
> uninterested in maintaining it as newer versions of Windows came out.
(What,
> you thought Windows was really backward compatible with older versions?
> :-) So, if it runs on your machine running Win98, great! But it may not.
>
> Serenade SV (see the URL Ed cited, below) is probably your best
alternative.
>
> > Ansoft does have a freeware student version that does most of the things

> > that
> > ARD used to do.
> >
> > For info, see:
> >
> > http://www.arrl.org/ard/
> >
> > 73,
> > Ed, W1RFI

3169. Re: How does a noise canceller work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-26 11:41:10 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <aabecm$f7d$7@quark.scn.rain.com>
Source record: 44511
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

In rec.radio.amateur.antenna Jason Hsu <jason_hsu@my-deja.com> wrote:

> The BIG question: Why doesn't the noise antenna receive some of the
> signal as well as the noise? Even if the noise antenna is much less
> efficient than the regular signal antenna, wouldn't this diminish the
> noise received as well as the signal received?

It may do so - so what? If the desired signal is that strong, then
reducing it a bit is not going to hurt.

Or you can adjust the noise antenna gain until the desired signal is
not reduced. The result would be a compromise on noise reduction.

The whole system works when there is a different S/N ratio between
the two antennas. If they are the same - as is often the case with
DX noise, then there is little or no noise reduction possible by
such simple signal inversion.

--
Bill Nelson (billn@peak.org)

3170. Re: How does a noise canceller work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-26 14:06:24 UTC
From: NoBody <NotHere@NoWhere.Net>
Message-ID: <3CC95E87.7846E03E@NoWhere.Net>
Source record: 44512
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Back YEARS AGO , before the days of transistors there was a home brew gadget by W6TNS (?) called Twin Noise Squelch.... it used a dual triode and worked great in my 10 meter mobile Gonset converter into car radio in my 1937 Graham.... ....

Bill Nelson wrote:

> In rec.radio.amateur.antenna Jason Hsu <jason_hsu@my-deja.com> wrote:
>
> > The BIG question: Why doesn't the noise antenna receive some of the
> > signal as well as the noise? Even if the noise antenna is much less
> > efficient than the regular signal antenna, wouldn't this diminish the
> > noise received as well as the signal received?
>
> It may do so - so what? If the desired signal is that strong, then
> reducing it a bit is not going to hurt.
>
> Or you can adjust the noise antenna gain until the desired signal is
> not reduced. The result would be a compromise on noise reduction.
>
> The whole system works when there is a different S/N ratio between
> the two antennas. If they are the same - as is often the case with
> DX noise, then there is little or no noise reduction possible by
> such simple signal inversion.
>
> --
> Bill Nelson (billn@peak.org)

3171. Re: Manual & Schematic needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-26 14:08:28 UTC
From: K0HB <KAYZEROHB@ELECTRICSMOKE.NET>
Message-ID: <wbdy8.6695$8p3.540327@newsread1.prod.itd.earthlink.net>
Source record: 44513
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

"John Miles" <jmiles@pop.removethistomailme.net> wrote

> Search on the correct spelling (Tektronix) and you'll likely have better
> luck. Besides eBay, have a look at the manual resources listed at
> http://www.reprise.com/host/tektronix/home/default.asp. This is not a
> particularly rare bird, so it shouldn't be too tough to come up with a
> manual for it.

Thanks, John.

(I nevar wuz to gud at speling.)

73, de Hans K0HB

3172. Re: How does a noise canceller work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-26 17:30:43 UTC
From: troglodite@aol.com
Message-ID: <20020426133043.02426.00004771@mb-fc.aol.com>
Source record: 44514

>
>Back YEARS AGO , before the days of transistors there was a home brew
>gadget by W6TNS (?) called Twin Noise Squelch.... it used a dual triode and
>worked great in my 10 meter mobile Gonset converter into car radio in my
>1937 Graham.... ....
>

I remember the TNS well. Wish I could find the schematic for it now - seems to me it used a 12AT7 or something similar. Anyway, I had a Gonset Triband converter, and was running the famous "28/9" transmitter in a 1934 Ford sedan. Those were the days.

Doug Moore KB9TMY (Formerly K6HWY)

3173. Re: Manual & Schematic needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-26 18:08:46 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CC997AE.48AAA51E@eznec.com>
Source record: 44515
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

I tried responding to K0HB by email, but the mail bounced.

Roy Lewallen, W7EL

3174. Re: How does a noise canceller work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-26 21:03:32 UTC
From: Paul <paul.mckee@chello.be>
Message-ID: <cSiy8.2584$Tz.141747@news.chello.be>
Source record: 44516
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

"Jason Hsu" <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0204250832.b5144c5@posting.google.com...
> There are several noise canceller products on the market, such as the
> MFJ-1025 and MFJ-1026.
>
> http://www.mfjenterprises.com/products.php?prodid=MFJ-1025
>
> http://www.mfjenterprises.com/products.php?prodid=MFJ-1026
>
> Both of these products are said to have the ability to remove local
> AND DX noise sources. This would be a miracle on the lower bands on
> summer nights, when distant lightning strikes wreak havoc on the
> bands.
>
> From what I understand, it connects to a signal antenna (your regular
> transmit antenna) and a noise antenna (a second antenna). The signal
> antenna picks up the weak signal and the noise. The noise antenna just
> picks up the noise. You amplify the noise from the noise antenna so
> that it is the same intensity as the noise from the signal antenna.
> You adjust the phase of the noise from the noise antenna so that it is
> 180 degrees out of phase with the noise from the signal antenna. The
> received RF from the signal and the noise antennas is added, the
> out-of-phase-noise components cancel out, and only the RF signal
> reaches the receiver.
>
> The BIG question: Why doesn't the noise antenna receive some of the
> signal as well as the noise? Even if the noise antenna is much less
> efficient than the regular signal antenna, wouldn't this diminish the
> noise received as well as the signal received?
>
> Jason Hsu, AG4DG
> usenet@@@jasonhsu.com
> http://www.jasonhsu.com/ham_radio-technical.html

From my understanding of how this is donee, the comments about phase
cancellation are correct. However, you should normally locate your noise
antenna(s) as close to the noise sources as possible. In this way, because
of the proximity to the noise source they are picking up much more of the
noise and less of the wanted signal (If they are placed within a building
for example)

Paul

(G4EGJ)

3175. Re: Reducing PLL noise - active noise cancelling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-26 21:04:24 UTC
From: mrmonett@yahoo.com
Message-ID: <7e4a2a11.0204261304.14e589d9@posting.google.com>
Source record: 44517

"Richard Hosking" <zaprichardh@iinet.net.au(remove the zap)> wrote in message news:<3cc8a2b3$0$11736@echo-01.iinet.net.au>...
> There were some posts in this NG about using an active noise cancelling
> scheme to reduce the noise output in power regulators (Wenzel).
> Is it possible to apply this scheme to a PLL loop filter?
> I guess the problem would be bandwidth - obviously there would have to be a
> low pass effect to allow the PLL error voltage past - still it should be
> possible to reduce the contribution from phase detector noise which is
> dominant within the loop bandwidth.
> Anyone got any excperience of this?
>
> Richard

Richard,

I followed the discussion on pll loop noise between you and John with great interest. The conclusion seems inescapable - to get good performance, you must have a good vco.

The schemes to reduce power supply noise may have some effect by reducing the supply noise to the op amp in the loop filter, but most op amps have good common mode rejection so there may not be much benefit.

Reducing supply noise may help in reducing jitter in the dividers and pll output signal, but I suspect divider jitter may be the dominant problem. If so, not much can be done.

There may be another way to eliminate the effect of jitter. Recent work on the binary sampler shows it removes timing jitter the same way as amplitude noise, as predicted in the theory page at

http://www3.sympatico.ca/add.automation/sampler/noise.htm#morenotes

For an example, while debugging a DDS-controlled TDR prototype, we measured about 100ps timing jitter in the step generator. However, the sampler easily showed the 160ps risetime of the step generator without the noise. This is shown in the TDR plot at

http://www3.sympatico.ca/add.automation/sampler/results.htm#binsamp

The binary sampler should also improve the noise performance in a pll in the same fashion, as shown in

http://www3.sympatico.ca/add.automation/sampler/noise.htm#micpll

As with all sampling pll's, it would need assistance getting locked, but if the vco phase noise were low enough to keep the loop locked in

the narrow bandwidth that you and John discussed, it should give
improved noise performance.

I would love to get my hands on one of your pcb's to try it, but alas,
I do not have a spectrum analyzer to measure the result. However,
there are other methods of measuring phase noise that may be suitable.

Regards, Mike

3176. Re: TL442 data ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-27 00:06:35 UTC
From: mzenier@eskimo.com
Message-ID: <aaenh0$4qu$1@eskinews.eskimo.com>
Source record: 44527

In article <3CC73D47.6924@pop.removethistomailme.net>,
John Miles <jmiles@pop.removethistomailme.net> wrote:

>The TL442 and SN76514 are the same part. I don't have a source for the
>data sheet (maybe someone has a ww.freetradezone.com subscription?), but
>there's a lot of applications info in "Solid State Design for the Radio
>Amateur."

Rather than figure out all those [#$%^&] anti-spam email addresses, I've
put the datasheet (that I got off Freetrade zone before they switched
it to subscription) on my FTP directory.

ftp://ftp.eskimo.com/u/m/mzenier/TL442C.pdf
Don't expect it to be there forever.

My question is what the heck is a SN16913P ? This appears to also be
a balanced mixer, and is used in the synthesizer in the Kenwood R-1000
reciever, from about 20 years ago. (That's why I got the TL442 datasheet,
to see if it was the same thing, but the pinout's different).

Mark Zenier mzenier@eskimo.com Washington State resident

3177. FA: Test Equipment

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-27 01:37:18 UTC
From: jcplpsm@aol.communicate
Message-ID: <20020426213718.08019.00005222@mb-cr.aol.com>
Source record: 44518

I have some test equipment up for auction. Great equipment for hams or radio hobbyists. If you'd like to check it out go to:

Heathkit AV-3 audio VTVM
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1724810276&r=0&t=0&showTutorial=0&ed=1020040554&indexURL=0&rd=1

Eico 147A signal tracer
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1096036188&r=0&t=0&showTutorial=0&ed=1020041506&indexURL=0&rd=1

Hickok 5600 RF signal generator
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1724826490&r=0&t=0&showTutorial=0&ed=1020042348&indexURL=0&rd=1

Thanks for looking.

3178. Yaesu FT-707 parts needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-27 02:08:21 UTC
From: KC8SSG <kc8ssg@qsl.net>
Message-ID: <pKny8.605$Z46.6256@news>
Source record: 44519
Cross-posted to: alt.ham-radio.marketplace,alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

I need a band switch atleast. Wouldn't mind picking up a parts unit. Let me know what you got!
Rob crandall@ee.net

KC8SSG

3179. Re: Reducing PLL noise - active noise cancelling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-27 02:25:12 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <aad28t$o89$1@slb6.atl.mindspring.net>
Source record: 44520

The typical limiting item for phase noise in a PLL is the performance of the VCO itself.

There is a limit to the noise reduction the dividers and phase comparator can obtain and that is degraded by the number of divisions prior to the phase comparator.

Figure on 20* log(N) where N is the number of divisions in the divider logic. with a division of 0, the noise floor of digital logic and phase comparators is around -150 dBc in a 1 Hertz bandwith at the best of times.

With a divide by 100 for example, then 20 * log(100) = 40

That is reduces the -150 dBc to get -110 dBc as the best possible phase noise in the loop bandwidth.

So, that dictates the loop bandwith... Where the performance is better of the 'freerunning' VCO phase noise compared to the noise level the dividers/comparator bottom out at.

There is no practical method to use 'active noise cancelling' since the noise is a random phenomenon and originates in the VCO itself.

The best choice is to reduce the tuning range of the VCO and use a high Q inductor in the VCO resonant tank. In this design, the tradeoff was to use a single VCO which simplifies the design tremendously, but it also means the VCO is fairly noisy.

He could have used several VCOs and gotten better wideband phase noise but that would have been a lot more expensive and made the circuitry much more complicated.

Design tradeoffs are always a compromise between cost and performance. Sigh....

Jim Pennell
N6BIU

3180. Re: Ping - maxpowa

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-27 04:09:55 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <aad8aj$7tt$8@quark.scn.rain.com>
Source record: 44521

maxpowa <maxpowa@iwontellsorry.com> wrote:

> It will be 7 weeks tomorrow, someone mentioned it took up to 2 months, if
> the goods aren't here friday next week, I'm gonna try to contact the guy, if
> I don't get a reply, I'm filling a complaint at the postal office, so they
> can get my money back. Every day that passes I find it harder to believe the
> US postal service is to blame, neither do I believe the package would be
> sitting at our customs, not for this long.

The post office will not help get your money back. If there is a
persistent pattern of non-shipment of goods, they will turn the info
over to federal agencies for possible prosecution. That is all the
help you will get.

I have been through this myself. The fraud statutes are basically
toothless for small time crooks.

--
Bill Nelson (billn@peak.org)

3181. Re: How does a noise canceller work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-27 04:16:47 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <aad8ne$7tt$9@quark.scn.rain.com>
Source record: 44522

W4pqw HS <w4pqwhs@aol.com> wrote:
> receiver. on most noises they work pretty good, requires a bit of practice to
> get it right,also the interference must be steady for the noise cancellor to
> really be effective...73 Harold W4PQW

That is not true. The method works in on any type of noise where the
sense antenna receives a different signal than the main receive antenna.

--
Bill Nelson (billn@peak.org)

3182. Re: First project/ first radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-27 07:44:55 UTC
From: Jim Larsen - AL7FS <AL7FS@ARRL.NET>
Message-ID: <3CCA56F7.B397FDF4@ARRL.NET>
Source record: 44523

Hi Matt, here is a message I sent earlier this month.

73, Jim
--
Jim Larsen, AL7FS, Anchorage, Alaska
(BP51cc) - 61.101 North, 149.824 West
mailto:al7fs@arrl.net - http://www.qsl.net/al7fs/
==========

-------- Original Message --------
Subject: Suggestions for a QRP newcomer - Hints and Links - First Kit
Date: Fri, 05 Apr 2002 10:11:15 -0900
From: Jim Larsen - AL7FS <AL7FS@ARRL.NET>
Organization: CranioSacral Therapy - ref: http://www.upledger.com

I am glad you enjoyed my website, at least I think that is what you are referring to. Congratulation on your new license. It can open up almost unlimited doors for you to explore. I have been a ham since I was 16 back in early 1965.

Beginner transceiver.

I don't know your financial situation but here are a few thoughts.

My favorite link page: http://www.njqrp.org/data/links.html I like it so much I made it my Home Page on Netscape.

Check out Doug Hendricks suggestions at http://www.qsl.net/westfla/kits/ Excellent logic on his suggestions but be aware, some of the kits may or may not be available. I think at least the first four suggestions are good but did not check further. By following Doug's suggestions you can move into progressively tougher kits.

Consider buying a good soldering iron. A Weller WCTPT is a good one. You want about a 675-700 degree tip. As a new solder person, you will need to remember the 3 second rule. Don't stay on a point too long or you will damage things. I wouldn't go below 650 degrees. If money is not a big issue, I like my Weller with temperature control. A good iron will cost a minimum of $90-100. Anything less and you may be disappointed. Also pick up some desoldering wick (a wire mesh braided thingy that sucks up solder when you heat it while on a bad solder point) for the occasional mistake. Do a search on http://www.google.com for "desoldering wick". Of course buy good solder, Rosin core only. Go to http://www.elecraft.com/ , click on Tech Notes Articles and then scroll down to the Soldering Tutorial. Also read the article about Ask Dr. Solder. You can learn what size of solder to buy from these

articles. You can also glean some good points from
http://www.qsl.net/ve3mcf/elecraft_reflect/Building_Notes.txt
and http://www.io.com/~n5fc/rfprobe1.htm

The Pixie:

Check out http://www.qrpp-i.com/index.htm and especially the Elmer 001 course info. The Tiny Tornado costs more but is a better radio. I suggest you buy the HSC Electronics (cheaper) version and build it for fun and for low cost. You can learn a bit how to solder with it and it may be fun to play with. It is not, however, a serious rig for using regularly. You would want a crystal on 7.040 which can be purchased from the NorCal QRP club for only $3.00.
http://www.fix.net/~jparker/norcal.html Click on kits and then scroll down to the info on crystals.

The next rig I suggest is from Small Wonder Labs.
http://www.smallwonderlabs.com/ Buy a SW40+ . You can buy this rig for $55-60 without a case or about $85 with a case. If you are new to this, the case would make sense. I bought the case as you probably saw in my article on my website.

This is a good starter kit and there is a whole class online to teach you all about it as you build. The class was called Elmer 101 and is found at
http://www.qsl.net/kf4trd/faq.html and
http://www.xcvr.com/default.asp?view=elmer101

Learning code.

My daughter used the ARRL CD for studying. I suggest you might try it. It is the CD used in the K7QO course which is what my daughter used. Worked well. K7QO strongly suggest the CD over the tapes.

Review:
http://www.arrl.org/FandES/ead/learncw/
http://www.qsl.net/k7qo/ scroll to "K7QO's Online Code Course - Beginning to Receive "

Best of luck, Lee, and I hope you continue with your CW. I have never gotten much above 20 wpm on my code but I still enjoy it and use it 95% of the time on HF. I usually operate around 15-18 wpm.

73, Jim

--
Jim Larsen, AL7FS, Anchorage, Alaska
(BP51cc) - 61.101 North, 149.824 West
mailto:al7fs@arrl.net - http://www.qsl.net/al7fs/

3183. Re: How does a noise canceller work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-27 08:51:45 UTC
From: Trevor Day <Trev@secornwall.com>
Message-ID: <NV7MATHhamy8Ew5C@southwestuk.demon.co.uk>
Source record: 44524

In message <aad8ne$7tt$9@quark.scn.rain.com>, Bill Nelson
<billn@spock.peak.org> writes
>W4pqw HS <w4pqwhs@aol.com> wrote:
>> receiver. on most noises they work pretty good, requires a bit of practice to
>> get it right,also the interference must be steady for the noise cancellor to
>> really be effective...73 Harold W4PQW
>
>That is not true. The method works in on any type of noise where the
>sense antenna receives a different signal than the main receive antenna.
>
Variations in amplitude or phase of the interfering or wanted signal
(say by aircraft reflection) are unlikely to result in an identical
change in both the sense and main aerials. This will result in
degredation of the output by a greater or lesser extent.

Trev G3ZYY
--
Trevor Day

3184. Re: Ping - maxpowa

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-27 10:15:31 UTC
From: maxpowa <maxpowa@iwontellsorry.com>
Message-ID: <7Tuy8.42223$Ze.6818@afrodite.telenet-ops.be>
Source record: 44525

"Bill Nelson" <billn@spock.peak.org> schreef in bericht
news:aad8aj$7tt$8@quark.scn.rain.com...

>
> The post office will not help get your money back. If there is a
> persistent pattern of non-shipment of goods, they will turn the info
> over to federal agencies for possible prosecution. That is all the
> help you will get.
>
> I have been through this myself. The fraud statutes are basically
> toothless for small time crooks.
>
> --
> Bill Nelson (billn@peak.org)
>

They said that when any problem arises, they will pay me back my money, and
I don't have to think of anything else, they'll handle any actions or
whatever that have to be taken to get their money back (from there on, it's
their money, because I got mine back already) :)
Anyways, I'm still in the believe that the goods will get here before it
comes to that.

3185. Re: Equivalent of SJE1462

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-27 12:23:12 UTC
From: Robin Birch <robin@ruffnready.co.uk>
Message-ID: <xTdWpdAwgpy8EwPT@falstaf.demon.co.uk>
Source record: 44526

Device specs look ok but package is wrong. The ones I am after are
TO126. However I can probably work out what to do from this.

Thanks

RObin
In article <3CC85293.8BC5E10B@netscape.net>, ".Bill :-)"
<TheRealExray@netscape.net> writes
>Robin Birch wrote:
>>
>> Hi,
>> Can anyone give me an equivalent for, or device parameters of, an
>> SJE1462 and SJE1461. These are NPN and PNP bipolar power transistors.
>>
>> Regards
>>
>> Robin Birch
>
>Does this look right?
>http://www.nteinc.com/specs/100to199/NTE186.html
>I found these searching *1461
>
>-Bill
>

3186. Re: TL442 data ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-27 18:30:31 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CCAEE5A.77F1@pop.removethistomailme.net>
Source record: 44528

Mark Zenier wrote:
>
> Rather than figure out all those [#$%^&] anti-spam email addresses, I've
> put the datasheet (that I got off Freetrade zone before they switched
> it to subscription) on my FTP directory.
>
> ftp://ftp.eskimo.com/u/m/mzenier/TL442C.pdf

Thanks!

> My question is what the heck is a SN16913P ? This appears to also be
> a balanced mixer, and is used in the synthesizer in the Kenwood R-1000
> reciever, from about 20 years ago. (That's why I got the TL442 datasheet,
> to see if it was the same thing, but the pinout's different).

Google is your friend (especially the Google cache). Just type in the
part #, with or without the -P suffix, and you'll find at least some
data. Sometimes this trick will turn up the whole data sheet for an
obsolete part on some obscure university server, but the TL442 is an
exception.

In the SN16913P's case, there's at least one cached copy of an old
Tripod site with the pinout.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3187. Re: First project/ first radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-27 19:04:56 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <sDCy8.21904$vX.3479@rwcrnsc53>
Source record: 44529

Matt -

Basic soldering guide
http://www.epemag.wimborne.co.uk/solderfaq.htm

Desoldering
http://ww2.netnitco.net/users/wt9w/Desolder.html

The "Art" of Kit building
http://ww2.netnitco.net/users/wt9w/kit%20building.html

Drop me an e-mail if you are looking for a good used WTCP or WTCPT soldering iron.

I regularly repair these Weller units for amateurs (since 1976) and would be happy to help.
In fact, Elecraft recommends the Weller WTCPT

73 de Greg
W9GB
w9gb@arrl.net

> -------- Original Message --------
> Subject: Suggestions for a QRP newcomer - Hints and Links - First Kit
> Date: Fri, 05 Apr 2002 10:11:15 -0900
> From: Jim Larsen - AL7FS <AL7FS@ARRL.NET>
> Organization: CranioSacral Therapy - ref: http://www.upledger.com
>
> Consider buying a good soldering iron. A Weller WCTPT is a good one.
> You want about a 675-700 degree tip. As a new solder person, you will
> need to remember the 3 second rule. Don't stay on a point too long or
> you will damage things. I wouldn't go below 650 degrees. If money is
> not a big issue, I like my Weller with temperature control. A good iron
> will cost a minimum of $90-100. Anything less and you may be
> disappointed. Also pick up some desoldering wick (a wire mesh braided
> thingy that sucks up solder when you heat it while on a bad solder
> point) for the occasional mistake. Do a search on http://www.google.com
> for "desoldering wick". Of course buy good solder, Rosin core only. Go
> to http://www.elecraft.com/ , click on Tech Notes Articles and then
> scroll down to the Soldering Tutorial. Also read the article about Ask
> Dr. Solder. You can learn what size of solder to buy from these
> articles. You can also glean some good points from
> http://www.qsl.net/ve3mcf/elecraft_reflect/Building_Notes.txt
> and http://www.io.com/~n5fc/rfprobe1.htm
>

3188. Re: epiphyte

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-27 23:22:38 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <2pGy8.66880$CH.9950@rwcrnsc52.ops.asp.att.net>
Source record: 44530

Bob -

This is a useful page for my QRP searches

http://www.njqrp.org/data/links.html

Greg
w9gb

"Bob Liesenfeld" <wb0poq@visi.com> wrote in message
news:3CC4D165.4845D177@visi.com...
> Hi gang,
> Anyone know if a kit for this ssb qrp rig is available anywhere?
> Thanks
> 72 Bob WB0POQ

3189. Re: Antenna material? Copper?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 03:07:09 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <wHJy8.160862$CH1.120453@sccrnsc02>
Source record: 44531

Main Issues

Weight (always an issue with larger antennas when you need a rotor to turn it)
Price per foot (which has varied quite a bit over past 20 years)

Minor issue

Outdoor corrosion of bare copper vs bare aluminum

w9gb

"Bpitt" <bpitt@aol.com> wrote in message news:20020415091140.27712.00003698@mb-fs.aol.com...
> About to get my first rig. I was licensed back in February and have been
> studying the 'build-it-yourself' websites'. My question is this, every example
> has used aluminum tubing for the beams, except the copper j-pole I saw. Can I
> not use copper instead of aluminum on the beams? Is it not as good? The
> reason is I have a LOT of copper tubing left over from some plumbing work I
> helped with. I just thought that maybe I could use it for my 2 meter beam
> instead of having to buy the aluminum stuff. Any thoughts? Thank you for your
> time.
> KD5RJF

3190. Re: Dan's Small Parts - April 9th update

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 03:13:49 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <NNJy8.150149$G72.85636@sccrnsc01>
Source record: 44532

Well the web site main page was updated on April 9th

http://www.fix.net/~jparker/dans.html

w9gb

"Dick Carroll" <dixie@townsqr.com> wrote in message
news:a96ngs$6vl$0@208.206.142.113...
>
> "atec77(nospam)" wrote:
> >
> > I find this kinda odd. I can send anywhere in my little country (AU) for
> > around 4$ us overnight. one side to the other , and frankly I hate our
> > postal service. maybe its all the nutters you have working in yours ?
>
> Nope, it's just the 'system'. On the established routes US Mail
> service is quite good. It's the 'out of the way' destinations which have
> a valid claim to 'snail mail' service. Who knows where a package goes
> enroute?

3191. Junkbox Parts for Sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 03:23:51 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <lOJy8.42$L4.10012@news1.iquest.net>
Source record: 44533
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap,rec.radio.amateur.misc

```
Junkbox Surplus Parts for Sale as of 04/28/02
==============================================
NEWest stuff!!

LM78L62ACZ Volt regulators, TO92 format 5/$3.00 10/$5.00

SMT2222's - Surf Mount 2N2222 NPN's - 200/$5
SMT4403's - Surf Mount 2N4403 PNP's - 200/$5

470pf 5% surf mount caps - 200/$5
1000pf 20% surf mount caps - 200/$5

9.8304 Mhz Crystals, 1/4 in tall - 5 for $2.00
27mH inductors with radial leads - 50 for $7.00

================================================

Caps - All new, old stock. No pulls.
====================================
NEW .1 uF Poly/Film caps - 10% 250v, new stock, paper tape, nice
long leads. These are not NPO and are made by S&M Components
50/$3.00

.01 uF ceramic caps, 10% 100v brand new by Kyocera
50/$3 or 100/$5

3300pf ceramic caps, 10% 50v
50/$3 or 100/$5

1000pf blue mono caps, 10% 100v
50/$3 or 100/$5

470pf ceramics on paper tape, rated 5% (NPO)
50/$3 or 100/$5

12pf NPO ceramics on tape
50/$4 or 100/$7

Voltage Regulators
==================
L7805ACV voltage regulators TO220 case. 5 for $4.00
LM7812T voltage regulators. TO220 case. 5 for $4.00
LM317T Adjust. Positive Voltage Regulator TO220. 6 for $5.00

Key/Headphone Jacks
===================
These are 3.5mm female stereo PCB mount jacks. Can be used in
```

ugly/manhattan building projects with no problems.
3/$1.35 (or send a buck and a stamp)

Transistors
==========
TP2222 plastic TO92 NPN - NEW PARTS (House brand 2N2222)100/$7 50/4.00
2N3906's plastic TO92. PNP - 50/4.00 NEW PARTS
2N3704's plastic TO92, NPN - 50/4.00 NEW PARTS

Special Deal
PN2222A - TO92 - Bag of 200 for $11.00

2N7000 MOSFET - 5/$2

IRF540's TMOS Power FET, N-Channel, 27A, 100v RDS(on) = .070 Ohms
http://www.onsemi.com/pub/Collateral/IRF540-D.PDF
for data sheet - $1.00 each.

BC847B - Surface Mount NPN's, general purpose
CBO = 50v, CEO = 45v, EBO = 6v, Collector Current Max = 100 mA,
electrical characteristic curves for this unit are the same as the
PN2222A, SST222A, MMST2222A, and UMT222A transistor. These are new
stock, on SM tape.
200pc/$5.00

Op AMPS, Comparators
====================
LM741CN - Single Op Amp, 8 Pin Dip, 6 for $2.00
http://www.hep.ph.ic.ac.uk/~hallg/Instrumentation/Data/LM741.pdf

BA4558 - Dual Op Amp, 8 Pin Dip, 4 for $1.50
http://www.rohm.com/products/databook/standard/pdf/ba4558.pdf

BA10324 - LM324 equiv Quad Ground Sense Op Amp 14 pin, 4 for $1.50
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10358 - Dual Ground Sense Op Amp, 8 pin, 4 for $1.50
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10393 - Dual Comparator 8 pin dip, 4 for $1.50
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10339 - Quad Comparator 14 pin, 4 for $1.50
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA4560 - Dual High Slew Op Amp, 4 for $1.50
http://www.rohm.com/products/databook/standard/pdf/ba4560.pdf

Diodes
======
1N4148 - You always need these. 75 for $2.00 These are NEW.

Let me know if you're interested. All prices are post paid to the
USA, unless otherwise noted. I will ship to non US

--

=======================================
KB9BVN/QRP - New Whiteland IN - EM69WN
QRP-ARCI #10223 QRP-L #1540 FIST #5695
FISTS CC #764 - Proud Member ARRL
HEATH HW-9 @ 2W or NORCAL 40A @ 1.3W
INTO INFAMOUS AF4PS ATTIC DIPOLE
SOC #400 AND FLYING PIGS QRP #-57
=======================================

3192. Sventlana Dentron MLA2500 Conversions

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 03:23:55 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <fXJy8.150215$G72.85663@sccrnsc01>
Source record: 44534
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Which conversion ?

Svetlana Tech Bulletins
http://www.svetlana.com/docs/TechBulletins/TB.html

W6KT conversion
4CX400A Russian Tubes for the MLA-2500 Amplifier
http://www.svetlana.com/docs/TechBulletins/technoteNo14.html

The Easy MLA-2500 Conversion
http://www.svetlana.com/docs/TechBulletins/technoteNo44.html

New Life for Dentron MLA2500s - 4CX800A
(QST May 96 pg.45-48)
Zip file on Svetlana web site

Greg
w9gb

"Gary - KJ6Q" <davison7@gte.net> wrote in message
news:hWnt8.1863$I64.253@nwrddc02.gnilink.net...
> Just carefully check the claimed power output AFTER the mods
> suggested - and compare them with the 2 KW the STOCK Dentron's do -
> THAT alone should convince you of the validity of the "conversion"...
>
> There are FAR better ways to spend yer time and money than on a
> "conversion" that leaves you with an amp the now only has about the
> same OUTPUT as a stock SB-200 or similar amp that can be bought for
> LESS than the cost of the conversion of the 2500B...
>
> --
> Gary - KJ6Q
> = = = = = = = =
>
>
> "NI4L" <ni4l@charter.net> wrote in message
> news:3CB5E884.1C78C36D@charter.net...
> > hi i was able to download it from one of the new places listed thank
> you.
> > Has anyone tried this and if so what was the outcome. Anyone have
> any better
> > ideas?
> > chris NI4L
> >
> > "Kenneth D. Grimm, K4XL" wrote:

> >
> > > >http://www.svetlana.com/docs/TechBulletins/TB.html
> > > > i need some help i tried to download this but it will not work
> can
> > > >someone else try or do you have it on file somewhere and could
> you email
> > > >it to me?
> > > >thanks chris NI4L
> > >
> > > The ftp site that Svetlana has listed (oak.oakland.edu) seems to
> be
> > > down. Odd, too, since it has been operating since way before the
> web
> > > was invented!
> > > What you are looking for is a file called mla2500b.zip. I think
> you
> > > will find it at the following address:
> > > http://ring.omp.ad.jp/pub/misc/ham/funet/arrl/qst-binaries/ or at
> > >
> > >
> http://ring.tains.tohoku.ac.jp/pub/misc/ham/funet/arrl/qst-binaries/
> > >
> > > Good luck with your conversion.
> > >
> > > 73,
> > >
> > > Ken K4XL - Replace "invalid" with "net" to reply.
> > > *** BoatAnchor Manual Archive ***
> > > On the web at http://bama.sbc.edu or
> > > FTP site info: bama.sbc.edu login: anonymous p/w: youremailadr
> >
> > --
> >
> > NI4L CUSTOM RESONANT DIPOLE
> > LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
> > Made with the same components used by our military forces today
> > Custom made to YOUR FREQUENCY of operation
> > Let me take the hassle out of making a RESONANT DIPOLE for you.
> > Click here for more info... http://www.angelfire.com/nb/ni4l/
> >
> >
>

3193. O-Scope Probes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 03:35:47 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <xZJy8.43$L4.10044@news1.iquest.net>
Source record: 44535
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

Hey gang,

I have no personal connection with these guys other than being a happy customer, but I saw these on the website and thought others might benefit.

Ocean State Electronics is selling 65Mhz O Scope probes for $13.95 (3 pos switch X1, REF, X10) and they fit all scopes with BNC connectors. They also have 100 Mhz probes for $26.95 same config but with a 5 piece accessory kit.

http://www.oselectronics.com/ose_p8.htm

Bottom of the page

73 de KB9BVN/AE

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==========
KB9BVN/QRP - New Whiteland IN - EM69WN
QRP-ARCI #10223 QRP-L #1540 FIST #5695
FISTS CC #764 - Proud Member ARRL
HEATH HW-9 @ 2W or NORCAL 40A @ 1.3W
INTO INFAMOUS AF4PS ATTIC DIPOLE
SOC #400 AND FLYING PIGS QRP #-57
==========

3194. Re: O-Scope Probes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 03:44:02 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CCB7002.658A4D68@netscape.net>
Source record: 44536

Scrounger wrote:
>
> Hey gang,
>
> I have no personal connection with these guys other than being a happy
> customer, but I saw these on the website and thought others might benefit.
>
> Ocean State Electronics

I'm not a happy customer of OSE. His method of saying 'out-of-stock'
which was about 6 out of 8 items was to not respond at all to an order
placed via fax. It took 30 days to get an email response explaining
this.
But, I hear others have had good experience with them.
-Bill M

3195. CDE CAPS 220PF@500WC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 04:13:01 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3CCB76CD.4646453@charter.net>
Source record: 44537
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

I have eight of these brand new never installed. 50.00 shipped to your
door.
specs below.

The part number is 380LX221M500A032.

Cap uF Volts. Surge. Catalog Number..... In. ESR Max. ESR Max.
Ripple
Max Ripple Max Nominal Size
(WVdc) Vdc Stk +25C +25C
+85C +85C D x L
120Hz 20kHz
120Hz
(A) 20kHz (A) (mm)
(Ohms) (Ohms)

220 500.0 550 380LX221M500A032 0.754 0.339
1.500 2.100 35 X 35

--

NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

3196. Re: QUESTIONS on the noise generator in the ARRL's noise bridge circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 04:17:45 UTC
From: numeric <numeric@worldnet.att.net>
Message-ID: <JJKy8.50390$Rw2.3942036@bgtnsc05-news.ops.worldnet.att.net>
Source record: 44538
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I have been looking for a broad band noise generator but so far I have been
un-successful. The HP noise diodes are very expensive GG's and I have
doubted that the NE555 timer chip could produce a predictable noise spectrum
output level. Your claim of a flat 0dbm output is a welcome surprise.
Question; is it possible to provide a predictable output level or at-least
calibrate the noise level output without an expensive spectrum analyzer or
other expensive equipment ?
I would be interested in your noise generator planes.
Thanks in advance for your comments.

"Pete Gianakopoulos" <n.gianakopoulos@worldnet.att.net> wrote in message
news:ZxIk8.12622$tP2.1084008@bgtnsc05-news.ops.worldnet.att.net...
> This might be a little off topic, but I have taken the broadband noise
> circuit from one of the other ARRL handbooks, and added enough gain after
> the diode. The result is a noise generator that will put out 0dBm from
> 10KHz to 1.3GHz, with a flat output across this range. I would be glad to
> share the circuit, along with board layouts to interested parties. What I
> use this circuit for is characterizing RF filters, along with a spectrum
> analyzer.
>
> Pete Gianakopoulos KE9OA
>
> Ian White, G3SEK <G3SEK@ifwtech.com> wrote in message
> news:l1Bf0PBELkk8EA$B@ifwtech.com...
> > Jason Hsu wrote:
> > >I have some questions regarding the noise generator for the noise
> > >bridge circuit on page 27-25 in _The ARRL Antenna Book_ (layout at
> > >http://www.arrl.org/notes/hbk-templates/rxbridge.pdf). As you can
> > >see, the chief component of this is the NE555P chip
> > >(http://focus.ti.com/docs/prod/folders/print/ne555.html,
> > >http://www-s.ti.com/sc/ds/ne555.pdf).
> > >
> > >The book says that this noise generator produces a 50% duty-cycle
> > >1000-Hz square wave signal. This signal is applied to the cathode of
> > >the Zener diode and then sent on to the amplifier. So the NE555P chip
> > >produces the white noise and the Zener diode seems to be the mechanism
> > >on which this white noise is placed on a broadband RF carrier.
> >
> > The 555 produces a chopped DC supply to the zener (actually, avalanche)
> > diode. The diode produces the broadband RF noise.
> >
> > > I
> > >noticed that the port 4 (RESET) continuously receives 9V, presumably

> > >to ensure that the chip constantly resets and doesn't get stuck in one
> > >state (as some variation is needed to produce the pulses). Port 8, of
> > >course, needs 9V in order to keep the digital elements (flip-flop,
> > >BJT, and logic gates) running. Port 3, of course, is the output.
> > >
> > >I wish the book described this circuit in more detail. My questions:
> > >1. What does the 6800-ohm resistor between the VCC port and the DISCH
> > >port do? Does this influence the frequency of the white noise
> > >generator?
> > >2. What is the purpose of the 6800 ohm resistor and two 1N914 diodes
> > >between the TRIG and DISCH ports? My guess is that it is part of a
> > >feedback network used to generate the square wave.
> >
> > For information on how the 555 works, take a look at a
> > practically-oriented electronics text such as 'The Art of Electronics'
> > by Horowitz and Hill.
> >
> > >3. What is the purpose of the 1800 ohm resistor between port 3 and
> > >the D3 Zener diode?
> >
> > To set the current through the diode, and also to act as an RF 'choke'.
> >
> > >4. How exactly does the D3 Zener diode modulate the output of the
> > >noise generator onto a broad range of RF frequencies?
> > >
> > D3 *is* the broadband noise generator.
> >
> > --
> > 73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
> > 'In Practice' columnist for RadCom (RSGB)
> > http://www.ifwtech.com/g3sek
>
>

3197. Re: epiphyte

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 05:00:47 UTC
From: "K.chattenton" <k.chattenton@btopenwold.com>
Message-ID: <aafvlu$r7l$1@paris.btinternet.com>
Source record: 44539

Hi Bob, all,

I have a complete set of parts (plus many, many spares) for the "EP-3"
version of this kit
(including the "pro" PCB board). For sale.

If you would like any more info please contact me direct....cheers, Ken,
G4KIR.
"w9gb" <gregory.beat@attbi.com> wrote in message
news:2pGy8.66880$CH.9950@rwcrnsc52.ops.asp.att.net...
> Bob -
>
> This is a useful page for my QRP searches
>
> http://www.njqrp.org/data/links.html
>
> Greg
> w9gb

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.346 / Virus Database: 194 - Release Date: 10/04/2002

3198. Re: G3JIR - URL? for technical info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 05:37:56 UTC
From: Robert Offer <robert@g1zjp.freeserve.co.uk>
Message-ID: <aag1s0$vs2$1@newsg3.svr.pol.co.uk>
Source record: 44540

Hi
I have done a search on Google and found this which might bring you an answer?

jack@hardcastle72.fsnet.co.uk

73
Bob
G1ZJP

3199. Icom 215 schematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 07:37:08 UTC
From: "Juan M. Perales" <nobody@novalid.com>
Message-ID: <1019979369.300854@rnewsr1.es.tisadm.net>
Source record: 44541

Hello.
I have an old Icom 215 FM transceiver in nice condition, but needs some repair. I dont have the schematics.
Could someone help me?
Many thanks for your help

73, Juan EA6NP

3200. test

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 09:40:11 UTC
From: Fredrik Stadler <ffredrik@yahoo.com>
Message-ID: <3CCBC37B.C4F59224@yahoo.com>
Source record: 44542

```
just testing
=======
```

3201. Need sig. gen. schem. Exact 7030

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 11:54:04 UTC
From: amdx <amdx@att.net>
Message-ID: <wpRy8.54930$QC1.4022483@bgtnsc04-news.ops.worldnet.att.net>
Source record: 44543

I'm looking for a schematic or manual to an Exact model 7030
signal generator.
Please let me know the cost.

Thanks
Mike

3202. FS: Books on Radio Antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 13:08:10 UTC
From: oldbooks78@aol.com
Message-ID: <20020428090810.07218.00006417@mb-dd.aol.com>
Source record: 44544

I currently have the following books for sale on radio antennas. Postage is $2 for the first book and $1 for each additional item (within the US, at cost elsewhere). The books are:

Moxon, L.A. "HF Antennas for All Locations" published by the Radio Society of Great Britain, 1991. ISBN 0900612576 The 260 page softbound book is in very good condition, clean with no page tears or pen marks, and a strong binding. A thorough treatment of HF antennas. Available for $9.

Straw, R. Dean (editor) "The ARRL Antenna Compendium (Vol. 6)", Newington, CT, U.S.A.: American Radio Relay League, Incorporated, 1999. ISBN: 0872597431 The 200 page softbound book is in fine condition, fresh and clean inside and out. All new articles (43 of them) on antennas, transmission lines and propagation - projects to build and new approaches to explore. Includes a CD inside the rear cover with the source data for modeling many of the antennas. Available for $12.

Straw, R. Dean (editor) "The ARRL Antenna Compendium (Vol. 5)", Newington, CT, U.S.A.: American Radio Relay League, Incorporated, 1996. ISBN: 0872595625 The 200 page softbound book is in near fine condition, fresh and clean inside and out except for a square neatly cut from the lower corner of the blank rear end page (it may have been a coupon or order form). Includes a diskette inside the rear cover with the source data for modeling many of the antennas. Available for $9.

Straw, R. Dean (editor) "The ARRL Antenna Compendium (Vol. 4)", Newington, CT, U.S.A.: American Radio Relay League, Incorporated, 1995. ISBN: 0872594912 The 204 page softbound book is in fine condition, fresh and clean inside and out.Includes a diskette inside the rear cover with the source data for modeling the antennas. Available for $10.

Hall, Gerald L. (editor) "The ARRL Antenna Compendium (Vol. 3)", Newington, CT, U.S.A.: American Radio Relay League, Incorporated, 1992. ISBN: 0872594017 The 236 page softbound book is in fine condition, fresh and clean inside and out. Lots of useful information on radio antennas. Available for $9.

Hall, Gerald L. (editor) "ARRL Antenna Compendium (Vol. 2)", Newington, CT, U.S.A.: American Radio Relay League, Incorporated, 1989. ISBN: 0872592545 The 208 page softbound book is in very good condition, fresh and clean inside and out. Available for $9.

Hall, Gerald; Paul Rinaldo; Maureen Thompson (editors) "ARRL Antenna Compendium, Volume 1", Newington, CT, U.S.A.: American Radio Relay League, Incorporated, 1985. ISBN: 0872590194 The 175 page softbound book is in fine condition, fresh and clean inside and out. Available for $9.

Erwin, David G4LQ1 "HF Antenna Collection", Radio Society of Great Britain, 1994. ISBN 1872309089 The 233 page softbound book is in fine condition, fresh and clean inside and out. Available for $9.

Orr, William I. "The W6SAI HF Antenna Handbook", Hicksville, NY, U.S.A.: C Q Communications, Incorporated, 1996. ISBN: 0943016150 The magazine-sized softbound book is in fine condition, fresh and clean inside and out. Available for $9.

If interested in any of the above, please email to "Oldbooks78@aol.com" to reserve. Thanks.

Dave

3203. ER and Vintage Field Day June 8 and 9

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 13:58:58 UTC
From: John Dilks <oldradio@worldnet.att.net>
Message-ID: <3CCBFEAE.74AB@worldnet.att.net>
Source record: 44545

To all BA'ers,

Electric Radio Magazine is promoting a Vintage Field Day this year on June 8th and 9th. To help generate interest, I put up a vintage field day web page, using 16 photos of an early 1950's SJRA field day.

If anyone has more information to share on this year's VFD, please email me directly and I'll add it to the page. Please copy Barry at ER too.... er@frontier.net

I hope you enjoy it. The link is below..... you'll find it on my ARRL Old Radio column web page.

73's de K2TQN, John Dilks

My Old Radio Column web page
http://www.eht.com/oldradio/arrl/

3204. Re: CDE CAPS 220PF@500WC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 14:42:25 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3CCC0A51.6A188615@charter.net>
Source record: 44546
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

these are the snap in's. short stubby ones.
8 in series gives you 27.5 uf@4000v

NI4L wrote:

> I have eight of these brand new never installed. 50.00 shipped to your
> door.
> specs below.
>
> The part number is 380LX221M500A032.
>
> Cap uF Volts. Surge. Catalog Number..... In. ESR Max. ESR Max.
> Ripple
> Max Ripple Max Nominal Size
> (WVdc) Vdc Stk +25C +25C
> +85C +85C D x L
> 120Hz 20kHz
> 120Hz
> (A) 20kHz (A) (mm)
> (Ohms) (Ohms)
>
> 220 500.0 550 380LX221M500A032 0.754 0.339
> 1.500 2.100 35 X 35
>
> --
>
> NI4L CUSTOM RESONANT DIPOLE
> LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
> Made with the same components used by our military forces today
> Custom made to YOUR FREQUENCY of operation
> Let me take the hassle out of making a RESONANT DIPOLE for you.
> Click here for more info... http://www.angelfire.com/nb/ni4l/

--

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3205. Re: CDE CAPS 220PF@500WC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 14:54:09 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CCC0D11.957BBFA1@netscape.net>
Source record: 44447
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

Now I get it. They are 220mf, not 220pf.
-Bill

NI4L wrote:
>
> these are the snap in's. short stubby ones.
> 8 in series gives you 27.5 uf@4000v
>
> NI4L wrote:
>
> > I have eight of these brand new never installed. 50.00 shipped to your
> > door.
> > specs below.
> >
> > The part number is 380LX221M500A032.
> >
> > Cap uF Volts. Surge. Catalog Number..... In. ESR Max. ESR Max.
> > Ripple
> > Max Ripple Max Nominal Size
> > (WVdc) Vdc Stk +25C +25C
> > +85C +85C D x L
> > 120Hz 20kHz
> > 120Hz
> > (A) 20kHz (A) (mm)
> > (Ohms) (Ohms)
> >
> > 220 500.0 550 380LX221M500A032 0.754 0.339
> > 1.500 2.100 35 X 35
> >
> > --
> >
> > NI4L CUSTOM RESONANT DIPOLE
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> > Click here for more info... http://www.angelfire.com/nb/ni4l/
>
> --
>
> NI4L CUSTOM RESONANT DIPOLE
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> Click here for more info... http://www.angelfire.com/nb/ni4l/

3206. Re: CDE CAPS 220PF@500WC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 14:58:37 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3CCC0E1D.4AB1EF8C@charter.net>
Source record: 44448
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

yea must have had a brain fart :)

".Bill :-)" wrote:

> Now I get it. They are 220mf, not 220pf.
> -Bill
>
> NI4L wrote:
> >
> > these are the snap in's. short stubby ones.
> > 8 in series gives you 27.5 uf@4000v
> >
> > NI4L wrote:
> >
> > > I have eight of these brand new never installed. 50.00 shipped to your
> > > door.
> > > specs below.
> > >
> > > The part number is 380LX221M500A032.
> > >
> > > Cap uF Volts. Surge. Catalog Number..... In. ESR Max. ESR Max.
> > > Ripple
> > > Max Ripple Max Nominal Size
> > > (WVdc) Vdc Stk +25C +25C
> > > +85C +85C D x L
> > > 120Hz 20kHz
> > > 120Hz
> > > (A) 20kHz (A) (mm)
> > > (Ohms) (Ohms)
> > >
> > > 220 500.0 550 380LX221M500A032 0.754 0.339
> > > 1.500 2.100 35 X 35
> > >
> > > --
> > >
> > > NI4L CUSTOM RESONANT DIPOLE
> > > LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
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> > > Custom made to YOUR FREQUENCY of operation
> > > Let me take the hassle out of making a RESONANT DIPOLE for you.
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> >
> > --
> >

> > NI4L CUSTOM RESONANT DIPOLE
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--

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3207. Re: HB Amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 15:48:20 UTC
From: redmondj <redmondj@concentric.net>
Message-ID: <3CCC1A3E.2040607@concentric.net>
Source record: 44449

Hello Mike,

I think that you will find that the plate capacitance of four 6146 tubes
will be too high for a decent Q on ten meters. I would look at
something like an 813 or a 4CX250B.

73, Alan _ K6RFK

KU4YP wrote:

>hello,
>
> is there anyone who has built a HB Amp for 10 meters? i have one of
>those monoband rigs for 10 and 4 6146s and was thinking of building a amp.
>not looking for a Kw, just about 200-500 watts. do not want to "work all
>neighbors" hihi.
>
>--
>73 de KU4YP "There is no spoon........."
>Mike Prevatt
>Willow Oak, Florida
>Amateur Radio Operator
>Active HF/VHF/UHF/Digital/QRP
>Homepage: http://home.earthlink.net/~ku4yp
>
>

3208. Re: CDE CAPS 220PF@500WC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 17:38:54 UTC
From: AL GOSS <renal@localnet.com>
Message-ID: <3CCC33AE.6541F5CD@localnet.com>
Source record: 44450
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

```
If not already sproken for---advise postal for money order.
tnx AL, K2ERG
```

3209. Read relay question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 18:34:26 UTC
From: kb9olm@yahoo.com
Message-ID: <cba55a41.0204281034.247d5df6@posting.google.com>
Source record: 44451

Hello,

Please let me know what are the fastest available read relays in a market.
Please reply directly to: kb9olm@yahoo.com
Thanks,
Vlad
kb9olm, Oakland CA

3210. Re: QUESTIONS on the noise generator in the ARRL's noise bridge circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 19:03:34 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <aahhrh$797$1@slb4.atl.mindspring.net>
Source record: 44454
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"Pete Gianakopoulos" <n.gianakopoulos@worldnet.att.net> wrote in message
news:ZxIk8.12622$tP2.1084008@bgtnsc05-news.ops.worldnet.att.net...
> This might be a little off topic, but I have taken the broadband noise
> circuit from one of the other ARRL handbooks, and added enough gain after
> the diode. The result is a noise generator that will put out 0dBm from
> 10KHz to 1.3GHz, with a flat output across this range. I would be glad to
> share the circuit, along with board layouts to interested parties. What I
> use this circuit for is characterizing RF filters, along with a spectrum
> analyzer.
>
> Pete Gianakopoulos KE9OA
>

==========

I have made broadband noise generators by starting with a 50 ohm resistor
to ground and then cascading amplifiers to get enough gain to show the
broadband noise.

This works and is VERY broadband.

==========

However, it has been my experience that making it all truely flat across
the band up to 1.3 GHz is difficult. Generally, there is slight tilt in
the gain of each stage and the effect is multiplied by each following
amplifier stage adding it's own slightly higher gain at low frequencies
to the total signal.

For just about any ham radio application, this slight rolloff can be
ignored. In any given segment that is being looked at through a filter
or some such the noise is flat for most practical purposes.

As for the power output of the noise generator, the TOTAL power output
is the sum of all the noise. This integrated total power adds up fast.

So, to keep linearity and avoid clipping the noise peaks, the power in
any given narrow band will be relatively low.... The total power output
of my noise generator is -3 dBm after the output stages 3 dB attenuator.
I use this attenuator to maintain a 50 ohm non-reactive output for the
noise generator.

I use a MAR-4 output stage so it's about 12 dB below the 1 dB compression
point of the amplifier. That allows for fairly high noise peaks while
keeping the noise linear.

You can easily built a similar system, I use MAR-4 stages and cascade enough of them to get a total gain aroun 100 dB. I add 3 dB attenuators here and there in my amplifier chains to keep the system 50 ohms and more or less non-reactive.

Otherwise, the 'S' parameters of the MAR-4 stages interact and start to take the effective impedance away from 50 ohms to some degree. THAT adds to tilt effects due to mismatch. Besides, they give convenient points to change the gain as required to get the total system gain I want.

==========

Now, this is a LOT of gain, and so I recommend breaking up the board into separate modules, with shielded sidewalls to avoid feedback. Also, watch out for power supply wires giving feedback coupling.

I use separate small Printed circuit boards to maintain total isolation and shielding. This system can and will pick up any signal off the air and amplify the heck out of it....

Oh yes, be very careful to control the DC voltage feeding the noise generator, small changes in the voltage will cause the noise level to go up or down a bit as each amplifiers gain varies slightly.

Jim Pennell
N6BIU

3211. 220uf@500v CDE caps FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 19:04:02 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3CCC47A2.E310FD8B@charter.net>
Source record: 44452
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

I have eight of these brand new never installed. 50.00 shipped to your
door. size 1.3 X 1.3 snap in's
Aluminum Electrolytic Capacitor
http://www.cornell-dubilier.com/
Snap-in, High Capacitance, 85 ï¿½C
380L/LX series
specs below.

The part number is 380LX221M500A032.

Cap uF Volts. Surge. Catalog Number..... In. ESR Max. ESR Max.
Ripple
Max Ripple Max Nominal Size
(WVdc) Vdc Stk +25C +25C
+85C +85C D x L
120Hz 20kHz
120Hz
(A) 20kHz (A) (mm)
(Ohms) (Ohms)

220 500.0 550 380LX221M500A032 0.754 0.339
1.500 2.100 35 X 35

--

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Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

3212. Re: program SB like spkr

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 19:10:53 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CCC4963.6455@pop.removethistomailme.net>
Source record: 44453

Moishe Mordkovych wrote:
>
> Hi!
> I need to program SB-compatible sound card to behave like PC speaker -
> nothing more.
> I need to make my DOS application use sound card instead of speaker.
> Any ASM or C code samples would be greatly appreciated.
> TIA,MM

In general, that's not going to happen. A sound card driver uses DMA to transfer entire blocks of samples at once with infrequent interrupts. A PC speaker driver uses very frequent interrupts or polling techniques to produce sound by toggling the speaker cone directly.

Years ago, there were a few hacks to make sound cards with no digital audio support (like the original Ad Lib board) play digitized sounds, but they sounded awful and were very hardware-specific. I'd be surprised if they worked at all on modern machines.

Some older sound cards (the Media Vision Pro Audio Spectrum series comes to mind) had the ability to trap accesses to the PC speaker port and play the sound through the speakers. I am not sure if any modern cards still offer this ability.

You might have a look at the "AIL Version 2" link in the table of contents on my site (below) for a commercial-quality sound-card driver package for real-mode DOS.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3213. FS: IFR-1200a

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 21:12:06 UTC
From: Jay <n2kpk@optonline.net>
Message-ID: <GAZy8.43950$sI3.10209189@news02.optonline.net>
Source record: 44455

IFR-1200a this version just has a oscilliscope, generates pl tones,dpl. No dvm option everything working. will have a pic soon to post or email. All I have is the cord. Might be able to get a maintenance manual if I find it. Does not have tracking generator or spectrum analyzer. This is an 1200a not 1200s. It does duplex generate, deviation meter freq meter, 1k tone, sinad. Other than that it works excellent. and looks good not beat.

$2000.00 you ship cost about $40 ups ground.

3214. Re: How does a noise canceller work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 21:44:47 UTC
From: Rik van Riel <riel@surriel.com>
Message-ID: <3CCC6D4F.1080803@surriel.com>
Source record: 44457
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Paul wrote:
> "Jason Hsu" <jason_hsu@my-deja.com> wrote in message
> news:f7d9a152.0204250832.b5144c5@posting.google.com...
>
>>There are several noise canceller products on the market, such as the
>>MFJ-1025 and MFJ-1026.
>>
>>http://www.mfjenterprises.com/products.php?prodid=MFJ-1025
>>
>>http://www.mfjenterprises.com/products.php?prodid=MFJ-102
>>The BIG question: Why doesn't the noise antenna receive some of the
>>signal as well as the noise? Even if the noise antenna is much less
>>efficient than the regular signal antenna, wouldn't this diminish the
>>noise received as well as the signal received?

> From my understanding of how this is donee, the comments about phase
> cancellation are correct. However, you should normally locate your noise
> antenna(s) as close to the noise sources as possible. In this way, because
> of the proximity to the noise source they are picking up much more of the
> noise and less of the wanted signal (If they are placed within a building
> for example)

I could imagine placing the noise antenna right in-between the PC and
the TV, while the main antenna would be between two trees outside of the
house.

I'm pretty sure the noise antenna will have a very different S/N ratio
than the main antenna ;)

3215. Re: TL442 data ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 21:49:46 UTC
From: la8ak.xnd@online.no
Message-ID: <3ccc688a.4931261@news.online.no>
Source record: 44456

On Sat, 27 Apr 2002 18:30:31 GMT, John Miles
<jmiles@pop.removethistomailme.net> wrote:

>
>Google is your friend (especially the Google cache). Just type in the
>part #, with or without the -P suffix, and you'll find at least some
>data. Sometimes this trick will turn up the whole data sheet for an
>obsolete part on some obscure university server, but the TL442 is an
>exception.
>
yes, it was almost amusing to use Google to see all the places TL442
or SN76514 were preferred, but some other devices were used instead,
tried to navagate between Japanese letters to see what info was about
76514, only to learn that it had been "just a thought"

73
LA8AK
--
remove ,xnd to reply

3216. Power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 23:08:22 UTC
From: keven <keven@nospamoceanwide.co.nz>
Message-ID: <3ccc8001@news.nz.asiaonline.net>
Source record: 44458

Hello

Is it possable to take two transformers with full wave center tap
rectifiers on each transformer and then connect the outputs of the
rectifiers in series to double the voltage?

The transformers are not of the same type. one is 720-0-720 and the
other one is 500-0-500.

Next question. Is there a way to find out the working ampere rating of a
transformer? There are no markings or numbers on them.

73
Kev.

3217. Re: How does a noise canceller work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-28 23:17:04 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <Qp%y8.78267$3C4.1244834@news1.east.cox.net>
Source record: 44459
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

> > "Jason Hsu" <jason_hsu@my-deja.com> wrote in message
> > news:f7d9a152.0204250832.b5144c5@posting.google.com...
> >
> > >>http://www.mfjenterprises.com/products.php?prodid=MFJ-102
> >>The BIG question: Why doesn't the noise antenna receive some of the
> >>signal as well as the noise? Even if the noise antenna is much less
> >>efficient than the regular signal antenna, wouldn't this diminish the
> >>noise received as well as the signal received?
>

It would depend on the phase relationships between the desired signal and the nulling antenna. Also, the amplitudes and phasing must exactly correct to achieve a perfect null. It is doubtful that you would achieve a perfect 180 degree phase relationship and exact amplitudes for both the desired and unwanted signals.

Peter

3218. Re: How does a noise canceller work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 00:00:38 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aai2f5cdf1@paris.btinternet.com>
Source record: 44460
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Just a comment - adjusting the two controls on a noise canceller has precisely the same effect as swinging the polar diagram of a two-element antenna around until the null lies in the same direction as the noise is coming from.

The two elements, of course, correspond to the usual antenna plus the 'noise' antenna.

$$$$$$$$$$$$$$$$$$$$$$$$$
Regards from Reg G4FGQ
Free Radio Modelling Software
Go to http://www.g4fgq.com
$$$$$$$$$$$$$$$$$$$$$$$$$

3219. Re: Power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 00:55:02 UTC
From: Gollywog <_eng@ilos.net>
Message-ID: <GR0z8.46696$MT2.1817692@news3.calgary.shaw.ca>
Source record: 44461

"keven" <keven@nospamoceanwide.co.nz> wrote in message
news:3ccc8001@news.nz.asiaonline.net...
> Hello
>
> Is it possable to take two transformers with full wave center tap
> rectifiers on each transformer and then connect the outputs of the
> rectifiers in series to double the voltage?
>
<snip>

I was about to ask the same thing. I've got two 25 amp 12 volt transformers and I want a 25 amp 24 volt power source for a high torque permanent magnet DC motor controller. I've put a schematic at http://www.ilos.net/~eng/psupply.gif

My initial idea is to make one transformer power the positive side and the other power the negative. I've got lots of questions about how thick my rubber gloves should be in order to touch this thing while it's plugged in. I've tried to cover in-rush current with a resistor/relay on each side. The regulator portions are straight off of the LM723 datasheets (i.e. the floating positive and floating negative configurations). The positive side pass transistor configuration comes from the 10 amp 28 volt supply described in the ARRL handbook and uses 2N3055s. The negative side is just the complement using MJ2955 PNPs (or equiv.) instead.

My application requires a bit of circuitry to handle the problem I've been having (i.e. cooking LM723s like their going out of style) when I reduce speed too quickly. The high wattage zener and power resistors on each side of the output are intended to dissipate a moderate amount of "generator" energy from the motor. The PMC 1505 PWM controller board I'm using has the very annoying feature that it passes the energy back to it's power input terminals to recharge lead acid batteries, etc during deceleration. With the ARRL handbook circuit, the LM723 goes up in a puff of smoke.

You're welcome to any/all of the ideas here, but I too am looking for comments and suggestions from anyone who actually knows what they are talking about.

Mike
va4mgw

********* \\\\lll//// *********
********** \ -- -- / **********
*********** (\@ @/) ***********
*** --oOOOo---(_)---oOOOo-- ***
ASCII a stupid question, get a stupid ANSI

3220. Re: How does a noise canceller work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 01:32:06 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CCCA296.ABCC3D9B@netscape.net>
Source record: 44462
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Rik van Riel wrote:

> > From my understanding of how this is donee, the comments about phase
> > cancellation are correct. However, you should normally locate your noise
> > antenna(s) as close to the noise sources as possible. In this way, because
> > of the proximity to the noise source they are picking up much more of the
> > noise and less of the wanted signal (If they are placed within a building
> > for example)
>
> I could imagine placing the noise antenna right in-between the PC and
> the TV, while the main antenna would be between two trees outside of the
> house.
>
> I'm pretty sure the noise antenna will have a very different S/N ratio
> than the main antenna ;)

Although TV sets and computers are often a source of noise garbage
nowadays, I don't think that this gadget is quite intended as a cure for
that. It probably would work to some degree, but the noise from a
crappy monitor, or other computer cnx might be more easily addressed in
other ways.
Folks with decent outdoor antenna configurations don't seem to suffer as
much from computer noise as the guy with a new plastic portable radio
inches from his computer.
The efficacy behind the MFJ type of product is solid but it ain't a
miracle box.
-Bill

3221. Re: QUESTIONS on the noise generator in the ARRL's noise bridge circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 01:42:38 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <hv6pcuc9us22vdugv852evtis397j6tqpc@4ax.com>
Source record: 44463
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Sun, 28 Apr 2002 04:17:45 GMT, "numeric" <numeric@worldnet.att.net>
wrote:

>I have been looking for a broad band noise generator but so far I have been
>un-successful. The HP noise diodes are very expensive GG's and I have
>doubted that the NE555 timer chip could produce a predictable noise spectrum
>output level. Your claim of a flat 0dbm output is a welcome surprise.
>Question; is it possible to provide a predictable output level or at-least
>calibrate the noise level output without an expensive spectrum analyzer or
>other expensive equipment ?
>I would be interested in your noise generator planes.
>Thanks in advance for your comments.
>
>
>"Pete Gianakopoulos" <n.gianakopoulos@worldnet.att.net> wrote in message
>news:ZxIk8.12622$tP2.1084008@bgtnsc05-news.ops.worldnet.att.net...
>> This might be a little off topic, but I have taken the broadband noise
>> circuit from one of the other ARRL handbooks, and added enough gain after
>> the diode. The result is a noise generator that will put out 0dBm from
>> 10KHz to 1.3GHz, with a flat output across this range. I would be glad to
>> share the circuit, along with board layouts to interested parties. What I
>> use this circuit for is characterizing RF filters, along with a spectrum
>> analyzer.
>>
>> Pete Gianakopoulos KE9OA

Hi OM,

0 dBm at any frequency over the range you specify is extremely
unlikely; that or the "rest of the story" has yet to be told.

Noise is generally specified in terms of 1 Hz bandwidths or in terms
of SQRT(Hz). When you look at the extremes of the frequency range and
the power level, 1 mW, it is highly unlikely without a noise source
pumping power well into the Watts range. 1W spread across 1 GHz at
1mW level would only work for bandwidths of 1 MHz - highly improbable
once you get to any IF but for the most uncommon of gear. If we were
to compute on the basis of 10 KHz IF bandwidth (being generous), the
source would have to supply 100W of noise. There are not many stable
1 GHz bandwidth amplifiers available with 1W into 50 Ohm outputs that
are also within the pocketbook of an amateur (but I would love to
discover a source of them - perhaps for cable TV distribution amps).

More likely is something several 10's of dB below 1 mW.

Jason,

Make it simple and build the source as designed; then calibrate it
against a receiver compared band by band with a source of known power.

73's
Richard Clark, KB7QHC

3222. Re: Power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 01:44:50 UTC
From: gaschafer@attbi.com
Message-ID: <3ccca63f.42733335@netnews.attbi.com>
Source record: 44464

It is even simpler than that. You could do what you suggested but you don't need the second set
of rectifiers. Picture a standard full wave rectifier circuit with the transformer center tap being the
negative output and the junction of the cathodes of the rectifiers as the positive output.
Break the junction of the two cathodes and hook one cathode to one side of the other
transformer and the remaining rectifiers cathode to the opposite side of the second transformer.
Now your positive output is the center tap of the second transformer. Then negative output
remains the center tap of the first transformer.

The only thing to watch out for is that the insulation on the two transformers can handle the
increased voltage. At the levels you are looking at it should be no problem. With lager
transformers in the several thousand volt range, sometimes the center tap needs to operate close
to ground because of the way the transformer is wound.

You need to get the proper phase of the primaries so that the voltages add or else they will
subtract and you will only get out what the difference is between the two transformers.

If both transformers were the same voltage, as another poster asked about, you could just hook
one end of each transformer together and run the remaining open end of each transformer to
each rectifier as you would with a single transformer. By having then in series this way you do
not use the center taps. Your new center tap is the junction where you hooked the two
transformers together.

73
Gary K4FMX

On Mon, 29 Apr 2002 11:08:22 +1200, keven
<keven@nospamoceanwide.co.nz> wrote:

>Hello
>
>Is it possable to take two transformers with full wave center tap

>rectifiers on each transformer and then connect the outputs of the
>rectifiers in series to double the voltage?
>
>The transformers are not of the same type. one is 720-0-720 and the
>other one is 500-0-500.
>
>Next question. Is there a way to find out the working ampere rating of a
>transformer? There are no markings or numbers on them.
>
>73
>Kev.

3223. Looking for QEX articles

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 02:45:45 UTC
From: Mark Mansfield <mmans@aeneas.net>
Message-ID: <Kl3z8.1517$gf1.129558@news.uswest.net>
Source record: 44465

I'm trying to find a couple of articles on high dynamic range mixers. I did
a search on the ARRL site and came up with two articles, both from 1999
March/April and Nov/Dec. The article is titled "High Performance Homebrew
Transceivers" in March/April but didn't get article name of Nov/Dec.
Would anyone happen to have those two .pdf files?
I sure would like to see those articles but I'm not a ARRL member, if
someone could help me out...
Thanks in Advance!
Mark

3224. Re: QUESTIONS on the noise generator in the ARRL's noise bridge circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 06:02:33 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <6clpcu4jct2vvn5fp641iqn6rcj9monbn4@4ax.com>
Source record: 44466
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Sun, 28 Apr 2002 12:03:34 -0700, "Jim Pennell"
<NoSpam@killspam.com> wrote:

> I have made broadband noise generators by starting with a 50 ohm resistor
>to ground and then cascading amplifiers to get enough gain to show the
>broadband noise.

<clip>

> As for the power output of the noise generator, the TOTAL power output
>is the sum of all the noise. This integrated total power adds up fast.

> So, to keep linearity and avoid clipping the noise peaks, the power in
>any given narrow band will be relatively low.... The total power output
>of my noise generator is -3 dBm after the output stages 3 dB attenuator.
>I use this attenuator to maintain a 50 ohm non-reactive output for the
>noise generator.

> I use a MAR-4 output stage so it's about 12 dB below the 1 dB compression
>point of the amplifier. That allows for fairly high noise peaks while
>keeping the noise linear.

> You can easily built a similar system, I use MAR-4 stages and cascade
>enough of them to get a total gain aroun 100 dB. I add 3 dB attenuators
>here and there in my amplifier chains to keep the system 50 ohms and more
>or less non-reactive.

That is quite a lot of gain.

An ideal resistor at room temperature would produce -174 dBm/Hz noise
density and amplified by a noiseless 100 dB amplifier chain would set
the output noise density to -74 dBm/Hz. If the noise bandwidth is 25
MHz, the total noise power would be 0 dBm. The MAR-4 has a quite flat
gain well above 1 GHz, so the total power would be at least +16 dBm,
well above the 1 dB compression point of the last MAR-4. To get 100 dB
of raw gain from a string of MAR-4s (gain 8 dB), 12 devices are
needed.

When using the mediocre noise figures and low gain of the MAR-4, the
equivalent noise power density at the first amplifier input would be
something around -169 .. -165 dBm/Hz and with 100 dB gain and 1 GHz
bandwidth, the last amplifier output would be about +25 dBm. Thus, in
order to maintain the 12-14 dB headroom at 0 dBm, the total gain must
be attenuated by 25 dB. With 12 stages, that would be about 2 dB
attenuation for each interstage coupling. With a net gain of 6
dB/stage, in order to calculate the equivalent input noise power, at

least the first few stages must be included in the noise figure calculations.

It might be a better idea to use some higher gain lower noise figure device as the first stage, thus the noise from the input resistor would be more dominating and thus, the temperature and supply current dependency of the first amplifier would have a smaller effect on the effective noise figure.

If the noise is needed only for the amateur bands, it might be practical to insert some selectivity before the last (few) amplifier stages, thus limiting the noise bandwidth and the total noise power output.

Paul OH3LWR

3225. Re: VFO using ceramic filters on 5.5, 6 and 10.7MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 07:52:59 UTC
From: la8ak.xnd@online.no
Message-ID: <3ccc6fa0.6745563@news.online.no>
Source record: 44467

On Thu, 25 Apr 2002 14:20:38 +0200, "joshua" <ita@email.hinet.hr>
wrote:

>HI JAN !!!I M very interesting for that ,please send me and i would please
>you if you have some good projects of pll s ,synthesizer s and vco s
>(130-160 mhz approx.) or if you now some good web-sites !!!73 de
>9a3xz-mladen-croatia !!!
The original message was received at Thu, 25 Apr 2002 18:48:13 +0200
from mail48-s.fg.online.no [148.122.161.48]

----- The following addresses had permanent fatal errors -----
<ita@email.hinet.hr>
(reason: 553 5.3.0 <ta@email.hinet.hr>... No such
user<ta@email.hinet.hr)

----- Transcript of session follows -----
... while talking to pop.hinet.hr.:
>>> RCPT To:<ta@email.hinet.hr>
<<< 553 5.3.0 <ta@email.hinet.hr>... No such user<ta@email.hinet.hr
550 5.1.1 <ta@email.hinet.hr>... User unknown

--
remove ,xnd to reply

3226. wireless serial link (possibly off-topic)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 08:27:35 UTC
From: Torfi <torfitorf@yahoo.com>
Message-ID: <3ccd040b$0$14913$9b622d9e@news.freenet.de>
Source record: 44468

Hello!

I�m currently tinkering with the idea of a digital remote monitor and looking for input.
Here�s what I want to do:

My garden is about 500 meters away from my appartment. I want to implement a method of remotly monitoring various moisture-levels. I already built the remote sensor using a PICmicro microprocessor, which outputs the data as serial data (RS232 compliant using max232) and works fine when connected to my laptop via cable.

As I can�t run a 500 meter cable to my flat, I�d like to bridge the distance using radio (no line of sight, some trees and a house in between). I�ve already played around with the 433MHz remote control units from Reynolds, but they are just too weak and also too expensive to want to put in an unsupervised area...

So... I�m looking for a way to transmitt a short burst of serial data every 5-10 minutes at around 1200baud (300 baud would be fine, too) across a radio link about 500 meters... I would like to use a license-free band (possible RC-model frequencies or 11m?)

Does anybody have any weblinks about how to modulate / demodulate the signals, and also how to build a good and small transmitter/receiver that doesn�t interfere?

It would be great if the transmitter/modulator could fit inside an altoids-mints box, as that would match my sensor set-up :-)

all comments welcome!

greets,

Torfi

3227. Re: wireless serial link (possibly off-topic)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 09:59:19 UTC
From: "atec77(nospam)" <"atec77(nospam)"@hotmail.com>
Message-ID: <3ccd199b$0$15149$afc38c87@news.optusnet.com.au>
Source record: 44469

or you could consider a suitable wireless wan card ?

Torfi wrote:
>
> Hello!
>
> I´m currently tinkering with the idea of a digital remote monitor and
> looking for input.
> Here´s what I want to do:
>
> My garden is about 500 meters away from my appartment. I want to implement
> a method of remotly monitoring various moisture-levels. I already built the
> remote sensor using a PICmicro microprocessor, which outputs the data as
> serial data (RS232 compliant using max232) and works fine when connected to
> my laptop via cable.
>
> As I can´t run a 500 meter cable to my flat, I´d like to bridge the distance
> using radio (no line of sight, some trees and a house in between). I´ve
> already played around with the 433MHz remote control units from Reynolds,
> but they are just too weak and also too expensive to want to put in an
> unsupervised area...
>
> So... I´m looking for a way to transmitt a short burst of serial data every
> 5-10 minutes at around 1200baud (300 baud would be fine, too) across a radio
> link about 500 meters... I would like to use a license-free band (possible
> RC-model frequencies or 11m?)
>
> Does anybody have any weblinks about how to modulate / demodulate the
> signals, and also how to build a good and small transmitter/receiver that
> doesn´t interfere?
>
> It would be great if the transmitter/modulator could fit inside an
> altoids-mints box, as that would match my sensor set-up :-)
>
> all comments welcome!
>
> greets,
>
> Torfi

3228. Re: wireless serial link (possibly off-topic)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 10:27:41 UTC
From: Torfi <torfitorf@yahoo.com>
Message-ID: <3ccd2031$0$138$9b622d9e@news.freenet.de>
Source record: 44470

"atec77(nospam)" <"atec77(nospam)"@(remove)hotmail.com> schrieb im
Newsbeitrag news:3ccd199b$0$15149$afc38c87@news.optusnet.com.au...
or you could consider a suitable wireless wan card ?

the functionality would definatly work, and with proper antennas, I might
even get the distance (although no line of sight might cause problems at
those frequencies?)...

...but it's just too expensive.... I'm afraid someone might go and steal the
equipment from my garden and would like to minimize potential costs of
rebuilding...

...also, the power-usage is too high... I have no powerline in the garden
and will have to run off (rechargable) batteries.

I have programmed my little microprocessor system to go to sleep mode for 5
minutes, then wake up and send the information and go back to sleep,
allowing the set-up to potentially run for weeks without a fresh
battery...(depends on the ammount of current drawn by the moisture sensors
and then of course by the radio...)

Torfi wrote:
>
> Hello!
>
> I'm currently tinkering with the idea of a digital remote monitor and
> looking for input.
> Here's what I want to do:
>
> My garden is about 500 meters away from my appartment. I want to
implement
> a method of remotly monitoring various moisture-levels. I already built
the
> remote sensor using a PICmicro microprocessor, which outputs the data as
> serial data (RS232 compliant using max232) and works fine when connected
to
> my laptop via cable.
>
> As I can't run a 500 meter cable to my flat, I'd like to bridge the
distance
> using radio (no line of sight, some trees and a house in between). I've
> already played around with the 433MHz remote control units from Reynolds,
> but they are just too weak and also too expensive to want to put in an
> unsupervised area...
>

> So... I m looking for a way to transmitt a short burst of serial data
every
> 5-10 minutes at around 1200baud (300 baud would be fine, too) across a
radio
> link about 500 meters... I would like to use a license-free band (possible
> RC-model frequencies or 11m?)
>
> Does anybody have any weblinks about how to modulate / demodulate the
> signals, and also how to build a good and small transmitter/receiver that
> doesn t interfere?
>
> It would be great if the transmitter/modulator could fit inside an
> altoids-mints box, as that would match my sensor set-up :-)
>
> all comments welcome!
>
> greets,
>
> Torfi

3229. Re: QUESTIONS on the noise generator in the ARRL's noise bridge circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 10:32:28 UTC
From: "Copper.net" <davidw@copper.net>
Message-ID: <yj9z8.98$jv4.32096@newsfeed.slurp.net>
Source record: 44471
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

IME, garden-variety Zener diodes, from 5-8 V, 1W or less, make FB pink-ng's.

Following the diode with a microwave-chip or 2-3-high-hfe-transistor
RC-coupled amp will yield enough pink-noise to give the neighbors problems.
If you're 'lucky', one or more stages in your amp will be over-driven wrt
base-emitter voltage swing, perhaps shortening its life, but giving even
more noise ;o)

73, W, N3HE

3230. Re: Looking for QEX articles

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 12:30:05 UTC
From: Mark Mansfield <mmans@aeneas.net>
Message-ID: <xVbz8.2$6b.22228@news.uswest.net>
Source record: 44472

Here's some additional info.
These are the links to the files.

http://www.arrl.org/members-only/tis/info/pdf/000304qex023.pdf

http://www.arrl.org/members-only/tis/info/pdf/990910qex003.pdf

http://www.arrl.org/members-only/tis/info/pdf/000304qex023.pdf

http://www.arrl.org/members-only/tis/info/pdf/991112qex041.pdf

http://www.arrl.org/members-only/tis/info/pdf/000102qex047.pdf

3231. Re: QUESTIONS on the noise generator in the ARRL's noise bridge circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 14:15:13 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <aajlj5$5uu$1@slb6.atl.mindspring.net>
Source record: 44473
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"Paul Keinanen" <keinanen@sci.fi> Wrote:

>> CLIP <<
>
> That is quite a lot of gain.
>
> An ideal resistor at room temperature would produce -174 dBm/Hz noise
> density and amplified by a noiseless 100 dB amplifier chain would set
> the output noise density to -74 dBm/Hz. If the noise bandwidth is 25
> MHz, the total noise power would be 0 dBm. The MAR-4 has a quite flat
> gain well above 1 GHz, so the total power would be at least +16 dBm,
> well above the 1 dB compression point of the last MAR-4. To get 100 dB
> of raw gain from a string of MAR-4s (gain 8 dB), 12 devices are
> needed.
>

>> CLIP <<
>
> It might be a better idea to use some higher gain lower noise figure
> device as the first stage, thus the noise from the input resistor
> would be more dominating and thus, the temperature and supply current
> dependency of the first amplifier would have a smaller effect on the
> effective noise figure.
>

Yes, the gain is somewhat excessive... But that was why I added some
interstage attenuators.

I used MAR-4 for the simple reason we have them in stock, but I do
like your suggestion of lower noise stage on the input section.

However, I will have to look at the frequency response of the higher
gain low noise stage.

The higher the gain, typically, the lower the internal feedback and
hence usually mose slope across the frequency band.....

I appreciate your comments, and I will take a close look at it, since
I am in the midst of building another noise Gen.

Jim Pennell
N6BIU

3232. Re: wireless serial link (possibly off-topic)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 15:44:12 UTC
From: Martin Wehner <martin@cyclotomic.com>
Message-ID: <3CCD6A4C.53972B74@cyclotomic.com>
Source record: 44474

Hey Torfi-

Check out http://www.rocket-roar.com/BWCM/toc.html.
Look at "Chapter 4 - Design Project 3: 900MHz Automatic Error-Correcting Data Link"
I have built something very similar in the past, but never bothered to put up such a detailed write-up on my web-site.
The error correction they use may be overkill in your case, but I am sure that the data presented in the write-up will help you get started.

One thing I'd like to point out is that the remote control units you used from Reynolds are right smack dab in the middle of the 70cm Amateur Radio band.
If at all possible, it would be preferable to use a module at a different frequency.

Good luck!

Martin

Martin Wehner (KG6KLF)

e-mail: <martin@cyclotomic.com>
web: http://www.cyclotomic.com/~martin

3233. Re: QUESTIONS on the noise generator in the ARRL's noise bridge circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 16:05:39 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <usyxU7BT9Wz8EAmT@ifwtech.co.uk>
Source record: 44475
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Jim Pennell wrote:
>
>"Paul Keinanen" <keinanen@sci.fi> Wrote:
>
> >> CLIP <<
>>
>> That is quite a lot of gain.
>>
>> An ideal resistor at room temperature would produce -174 dBm/Hz noise
>> density and amplified by a noiseless 100 dB amplifier chain would set
>> the output noise density to -74 dBm/Hz. If the noise bandwidth is 25
>> MHz, the total noise power would be 0 dBm. The MAR-4 has a quite flat
>> gain well above 1 GHz, so the total power would be at least +16 dBm,
>> well above the 1 dB compression point of the last MAR-4. To get 100 dB
>> of raw gain from a string of MAR-4s (gain 8 dB), 12 devices are
>> needed.
>>
>
> >> CLIP <<
>>
>> It might be a better idea to use some higher gain lower noise figure
>> device as the first stage, thus the noise from the input resistor
>> would be more dominating and thus, the temperature and supply current
>> dependency of the first amplifier would have a smaller effect on the
>> effective noise figure.
>>
>
>
> Yes, the gain is somewhat excessive... But that was why I added some
>interstage attenuators.
>
> I used MAR-4 for the simple reason we have them in stock, but I do
>like your suggestion of lower noise stage on the input section.
>
> However, I will have to look at the frequency response of the higher
>gain low noise stage.
>
> The higher the gain, typically, the lower the internal feedback and
>hence usually mose slope across the frequency band.....
>
The problem with that approach is the large number of cascaded gain
stages required, which means that the passband roll-offs of all the
individual amplifiers will add together (like adding extra poles to a

low-pass filter). If you start from a higher-level noise source, you need fewer amplifier stages and the noise output will hold up better at the high-frequency end.

There are no real worries about building an avalanche diode noise source with a flat frequency response up to at least 1GHz - it will produce 30-35dB more noise than a resistor, and give you a flying start in generating significant power levels of noise.

But I do strongly recommend using the B-E junction of a UHF/microwave transistor as the "diode", because the parasitic inductance of the stripline package is lower than that of *any* wire-ended device. With careful construction - chip components and zero lead lengths - you can take the flatness of the noise source almost for granted. (Been there, done that, and had them tested against commercial noise sources.)

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
New e-mail: g3sek@ifwtech.co.uk
New website: http://www.ifwtech.co.uk/g3sek

3234. Re: How does a noise canceller work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 16:38:14 UTC
From: Floyd Sense <sentek@sprintmail.com>
Message-ID: <WFez8.13204$iU4.1157383@newsread2.prod.itd.earthlink.net>
Source record: 44476
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

The MFJ unit works quite well against broadband white noise radiated by the switching power supplies of recent RCA large screen TVs. The trick is to position a noise antenna so that it receives a signal at least as strong as that received by your station antenna. These power supplies radiate a very strong broadband signal, and I found it necessary to position an antenna a couple of feet long very close to the TV to get the required signal strength on the noise input. It was then possible to almost completely eliminate the noise by adjusting the phase and gain controls on the MFJ. For this type of noise, I'd have to say that it is, indeed, a "miracle box". Anyone with an RCA TV who thinks he doesn't have this problem should try unplugging it sometime (not just turning it off).

I've found the box not very effective with noise emanating from the PC monitor. Reason? The noise antenna picks up many more signals because of its proximity to the monitor, and those same signals are not all heard on the station antenna. In that case, you'll never be able to null the monitor signals, but the MFJ will do a nice job of amplifying them for you! If your noise antenna is outdoors and positioned so that it picks up monitor signals of about the same strength as your station antenna, it ought to be able to null them quite well.

K8AC

".Bill :-)" <TheRealExray@netscape.net> wrote in message
news:3CCCA296.ABCC3D9B@netscape.net...
<<snip>>
> The efficacy behind the MFJ type of product is solid but it ain't a
> miracle box.
> -Bill
>

3235. WTB: 829B / 3E29 tube Socket

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 20:04:10 UTC
From: "R. Soetedjo" <robi@u.washington.edu>
Message-ID: <Pine.A41.4.44.0204291300530.18222-100000@mead5.u.washington.edu>
Source record: 44477
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.audio.tubes,rec.radio.swap

I'm looking for ceramic socket for 829B / 3E29 tube.

thanks
rob

3236. Re: WTB: 829B / 3E29 tube Socket

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 20:21:38 UTC
From: nospam@unknown.com
Message-ID: <3ccdabf3.15244457@news.telus.net>
Source record: 44478
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.audio.tubes,rec.radio.swap

Try one of these:

1) HAMfest
2) Flea Market
3) www.tubesandmore.com
4) DIY

Those are nice tubes. Have fun with those beauties!

--
Gregg

On Mon, 29 Apr 2002 13:04:10 -0700, "R. Soetedjo"
<robi@u.washington.edu> wrote:

>I'm looking for ceramic socket for 829B / 3E29 tube.
>
>thanks
>rob
>

3237. WANTED: schematic for HF noise canceller (like the MFJ-1026)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 20:32:24 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0204291232.20f95fb6@posting.google.com>
Source record: 44479
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Where can I find a schematic for a noise canceller for HF? I would
like to homebrew a noise canceller/preamplifier that would be similar
to the MFJ-1026. (Unfortunately, the MFJ manuals available online
don't include the schematic.)

I would particularly appreciate an explanation on how the various
parts of the circuit work (noise amplifier, noise phase shifter,
signal preamplifier, filters, etc.) and the transformer specifications
I need (so that I can use something available to me).

Jason Hsu, AG4DG
usenet@@@@jasonhsu.com
http://www.jasonhsu.com/ham_radio-technical.html

3238. APRS/ONSTAR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 21:12:46 UTC
From: K&#65533;HB <KAYZEROHANDSOMEBOY@ELECTRICSMOKE.NET>
Message-ID: <iHiz8.216$Uw4.23308@newsread1.prod.itd.earthlink.net>
Source record: 44480
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.digital,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

I have two new GM vehicles which came equipped with OnStar. Has anyone here figured out a way to intercept the OnStar latitude/longitude info for a feed to an APRS node?

73, de Hans, K0HB
k0hb at arrl dot net

3239. Re: WANTED: schematic for HF noise canceller (like the MFJ-1026)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 21:20:38 UTC
From: Al <ABurzynski@nojunk.satx.rr.com>
Message-ID: <GOiz8.12036$Q42.534415@typhoon.austin.rr.com>
Source record: 44481
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Very good information and a schematic for a Line-Synchronous Noise Blanker may be obtained here:
http://www.ussc.com/~turner/syn_blank.html
Al
KA5JGV

"Jason Hsu" <jason_hsu@my-deja.com> wrote in message news:f7d9a152.0204291232.20f95fb6@posting.google.com...
> Where can I find a schematic for a noise canceller for HF? > Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com
> http://www.jasonhsu.com/ham_radio-technical.html

3240. Re: QUESTIONS on the noise generator in the ARRL's noise bridge circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 21:48:52 UTC
From: "Sverre Holm (LA3ZA)" <la3za@qsl.net>
Message-ID: <8djz8.8093$2E.273008@news2.ulv.nextra.no>
Source record: 44482
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"Copper.net" <davidw@copper.net> wrote in message
news:yj9z8.98$jv4.32096@newsfeed.slurp.net...
> IME, garden-variety Zener diodes, from 5-8 V, 1W or less, make FB
pink-ng's.
>

Any advice on what current the zener should have? what gives maximum output?

73, Sverre
LA3ZA
www.qsl.net/la3za

3241. Re: WANTED: schematic for HF noise canceller (like the MFJ-1026)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 22:03:40 UTC
From: "Ed G." <Spurious@_REMOVE_StarBand.net>
Message-ID: <Xns91FF9953E1221Frog207Junocom@148.78.248.76>
Source record: 44483
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

> http://www.ussc.com/~turner/syn_blank.html

This looks like a nice noise blanker circuit and I have saved it for future reference; however, it doesn't answer the original poster's question, "Where can I find a schematic for a noise canceler for HF." He's talking about the RF phase cancellation device like the MFJ 1026. I'd be interested too.

Ed WB6SAT

3242. Re: APRS/ONSTAR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 22:22:25 UTC
From: Brian P Burke <bpburke@prodigy.net>
Message-ID: <BIjz8.2268$%b.165220697@newssvr16.news.prodigy.com>
Source record: 44484
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.digital,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

"K�HB" <KAYZEROHANDSOMEBOY@ELECTRICSMOKE.NET> wrote in message
news:iHiz8.216$Uw4.23308@newsread1.prod.itd.earthlink.net...
> I have two new GM vehicles which came equipped with OnStar. Has anyone
here
> figured out a way to intercept the OnStar latitude/longitude info for a
feed
> to an APRS node?
>
> 73, de Hans, K0HB
> k0hb at arrl dot net

I'd try TAPR or Buck Rogers first.

3243. Farnell 517-914 4.7mH inductor ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 22:42:18 UTC
From: la8ak.xnd@online.no
Message-ID: <3ccdcab8.9038996@news.online.no>
Source record: 44485

Just read the article in May Radcom by EI3CY about The Trafalgar
LF/VLF Receiver where he used some Farnell 517-914 4.7mH inductors

I am curious if somebody know the Q-value of this inductor. Suspect it
is not over 100 @136kHz?

73,
Jan-Martin
LA8AK
--
remove ,xnd to reply

3244. Epiphyte tranceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-29 23:38:51 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3ccdd8e9.1894808@news.freeserve.net>
Source record: 44486

Does anyone know of a URL for the circuit of the Epiphyte ?.
or perhaps a scan of the original article from QRPp.
thanks Mike W, G8NXD/ M3MSM qthr

3245. Re: 829B / 3E29 tube Socket

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 02:21:06 UTC
From: Carroll Conklin <aconklin@rcn.com>
Message-ID: <aakv47qf1@bob.news.rcn.net>
Source record: 44487
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.audio.tubes,rec.radio.swap

I have a National socket. It's for sale.

Carroll
R. Soetedjo <robi@u.washington.edu> wrote in message
news:Pine.A41.4.44.0204291300530.18222-100000@mead5.u.washington.edu...
> I'm looking for ceramic socket for 829B / 3E29 tube.
>
> thanks
> rob
>

3246. Re: QUESTIONS on the noise generator in the ARRL's noise bridge circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 03:35:10 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <aal3mijbf1@slb5.atl.mindspring.net>
Source record: 44488
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

----- Original Message -----
"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> Wrote:
>
> The problem with that approach is the large number of cascaded
> gain stages required, which means that the passband roll-offs
> of all the individual amplifiers will add together (like adding
> extra poles to a low-pass filter). If you start from a
> higher-level noise source, you need fewer amplifier stages and
> the noise output will hold up better at the high-frequency end.
>

Ian, that is a very good point. I ran some computer simulations
on my first design and I found I had to reduce the coupling capacitors
to "more or less" flatten the response.

If I am to believe it, I should see less than 1 dB gain variation
across the band....

Of course, it is not adding in various real world rolloff factors
and so I anticipate I will see more than that. I did try to add in
the parasitic elements of the coupling capacitors and the decoupling
DC feed inductors and so on but based on experience I know it will
be worse than the simulation.

I have never tried an avalanche diode using a microwave transistor
and I will see what that can do. I think I have some MRF901 around
here somewhere.

I appreciate the suggestion and I will give it a try. Starting
with that sort of noise will help a lot in making it all work nicely.

Jim Pennell
N6BIU

3247. Re: QUESTIONS on the noise generator in the ARRL's noise bridge circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 03:51:21 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <nr4scuo7fkldt6jgb2vl0kdmer6rt58uij@4ax.com>
Source record: 44489
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Mon, 29 Apr 2002 20:35:10 -0700, "Jim Pennell"
<NoSpam@killspam.com> wrote:

>----- Original Message -----
> "Ian White, G3SEK" <G3SEK@ifwtech.co.uk> Wrote:
>>
>> The problem with that approach is the large number of cascaded
>> gain stages required, which means that the passband roll-offs
>> of all the individual amplifiers will add together (like adding
>> extra poles to a low-pass filter). If you start from a
>> higher-level noise source, you need fewer amplifier stages and
>> the noise output will hold up better at the high-frequency end.
>>
>
>
> Ian, that is a very good point. I ran some computer simulations
>on my first design and I found I had to reduce the coupling capacitors
>to "more or less" flatten the response.
>
> If I am to believe it, I should see less than 1 dB gain variation
>across the band....
>
> Of course, it is not adding in various real world rolloff factors
>and so I anticipate I will see more than that. I did try to add in
>the parasitic elements of the coupling capacitors and the decoupling
>DC feed inductors and so on but based on experience I know it will
>be worse than the simulation.
>
> I have never tried an avalanche diode using a microwave transistor
>and I will see what that can do. I think I have some MRF901 around
>here somewhere.
>
> I appreciate the suggestion and I will give it a try. Starting
>with that sort of noise will help a lot in making it all work nicely.
>
>
> Jim Pennell
> N6BIU

Hi Jim, others,

You could do better with a mercury wetted relay bouncing at 100 Hz
feeding sufficient current to a 50 Ohm load. This use to be the
standard hi-speed circuit for O'Scope calibration in the 60's for the

same range of frequency. If I recall correctly, I used it for testing Sampling plug-ins.

73's
Richard Clark, KB7QHC

3248. Re: Power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 04:27:45 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3CCE1D36.F9C651D6@bellatlantic.net>
Source record: 44490

Gollywog wrote:
>
> "keven" <keven@nospamoceanwide.co.nz> wrote in message
> news:3ccc8001@news.nz.asiaonline.net...
> > Hello
> >
> > Is it possable to take two transformers with full wave center tap
> > rectifiers on each transformer and then connect the outputs of the
> > rectifiers in series to double the voltage?
> >
> <snip>
>
> I was about to ask the same thing. I've got two 25 amp 12 volt transformers
> and I want a 25 amp 24 volt power source for a high torque permanent magnet
> DC motor controller. I've put a schematic at
> http://www.ilos.net/~eng/psupply.gif
>
> My initial idea is to make one transformer power the positive side and the
> other power the negative. I've got lots of questions about how thick my
> rubber gloves should be in order to touch this thing while it's plugged in.
> I've tried to cover in-rush current with a resistor/relay on each side. The
> regulator portions are straight off of the LM723 datasheets (i.e. the
> floating positive and floating negative configurations). The positive side
> pass transistor configuration comes from the 10 amp 28 volt supply described
> in the ARRL handbook and uses 2N3055s. The negative side is just the
> complement using MJ2955 PNPs (or equiv.) instead.
>
> My application requires a bit of circuitry to handle the problem I've been
> having (i.e. cooking LM723s like their going out of style) when I reduce
> speed too quickly. The high wattage zener and power resistors on each side
> of the output are intended to dissipate a moderate amount of "generator"
> energy from the motor. The PMC 1505 PWM controller board I'm using has the
> very annoying feature that it passes the energy back to it's power input
> terminals to recharge lead acid batteries, etc during deceleration. With the
> ARRL handbook circuit, the LM723 goes up in a puff of smoke.
>
> You're welcome to any/all of the ideas here, but I too am looking for
> comments and suggestions from anyone who actually knows what they are
> talking about.

I don't know what I'm talking about - I have not built the
circuit you show on the web site. But I have a number of
thoughts. You may have already considered them - I don't know.
Put diodes across all the relay coils.

Put a diode in the output leg from the pass transistors to
the PWM controller. Yes, it has to be a big sucker > 25 amps.

Consider a redesign: simplify by putting the two transformer
secondaries in series, use a single bridge, filter bank and
regulator. And change the regulator to a LM 317, with a bunch
of 3055's in collector wraparound. Unless you have a compelling
reason against this, give it some real thought. There's a lot
of complexity in your circuit that can be eliminated if you
can use the single LM 317 approach.
>
> Mike
> va4mgw
>
> ********* \\\\lll//// *********
> ********** \ -- -- / **********
> *********** (\@ @/) ***********
> *** --oOOOo---(_)---oOOOo-- ***
> ASCII a stupid question, get a stupid ANSI

3249. Re: QUESTIONS on the noise generator in the ARRL's noise bridge circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 08:02:16 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CCE4F88.D5FF6673@eznec.com>
Source record: 44491
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I don't recall the mercury-wetted relays being used for high speed step generation -- the earliest devices for that purpose I recall used an avalance transistor, step recovery diode, or tunnel diode. But I do recall the mercury-wetted relay being used as an "input buster", to produce a high speed step at the rated maximum input voltage to a scope input. At the time, it was about the fastest 200 or 500 volt step you could make.

The problem with using a relay or any physically large device for high speed step or noise generation is the inevitable stray inductance and capacitances involved. These will always reduce the bandwidth and flatness of a step. What you have to do is maintain a really clean 50 ohm transmission line environment from the generating device to whatever you're observing it with. And in the case of high speed sampling plug-ins, even a fraction of an inch of the best line you can make will noticeably degrade the signal. When using microwave relays to distribute high speed steps, we avoided reed relays like the plague. They typically use Kovar contacts, because it's magnetic and matches the expansion coefficient of the glass. But the magnetic, relatively lossy material has very bad frequency-dependent skin effect loss, which really trashes a good step.

Roy Lewallen, W7EL

Richard Clark wrote:
>
> Hi Jim, others,
>
> You could do better with a mercury wetted relay bouncing at 100 Hz
> feeding sufficient current to a 50 Ohm load. This use to be the
> standard hi-speed circuit for O'Scope calibration in the 60's for the
> same range of frequency. If I recall correctly, I used it for testing
> Sampling plug-ins.
>
> 73's
> Richard Clark, KB7QHC

3250. 9:1 balun/transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 10:23:54 UTC
From: brian@robinsonb5.fsnet.co.uk
Message-ID: <aalq5imfo1@newsg3.svr.pol.co.uk>
Source record: 44492

HI,
I need to match a crystal filter of unknown terminal impedance possibly around 450/500ohms. to 50 ohms;Can anyone help, have looked at several sources but am confused. Thanks,

Brian G4OZA

3251. GW3PEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 10:26:59 UTC
From: brian@robinsonb5.fsnet.co.uk
Message-ID: <aalqbaksf1@newsg2.svr.pol.co.uk>
Source record: 44493

Hi,
Are you about, or does anyone know where to contact him? Would like to
discuss your Gen. coverage RX and DDS VFO.

Brian G4OZA

3252. Re: 9:1 balun/transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 13:53:04 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <xlxz8.1035$FH7.134653014@news.inreach.com>
Source record: 44494

Brian:

Since there is no need to change from balanced to unbalanced in this situation, you don't really need a "balun".

You might use an impedance transformer, but those are typically used where a broad frequency range needs to be covered.

To match the input or output of a narrow crystal filter to 50 ohms, a simple L network using a coil and capacitor could be used. And by making them adjustable (use a variable cap or coil) you can actually tweak the circuit to optimize performance.

If you go to the index on: http://www.btinternet.com/~g4fgq.regp/ you can find a program called "L Tuner" that will calculate the values for you. There are probably other resources you can use.

Regards,

Roger K6XQ

3253. Re: WTB: 829B / 3E29 tube Socket

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 14:17:34 UTC
From: Philip Lawrence <hitriode@iinet.net.au>
Message-ID: <3CCEA77E.AF5F0473@iinet.net.au>
Source record: 44495
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.audio.tubes,rec.radio.swap

You can buy the socket from Sovtek, it is the same as the socket for the
russian 6C33 i think

"R. Soetedjo" wrote:

> I'm looking for ceramic socket for 829B / 3E29 tube.
>
> thanks
> rob

3254. Re: Power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 14:19:47 UTC
From: Peter Voelpel <peter.voelpel@t-online.de>
Message-ID: <aam97cvqi04$1@news.t-online.com>
Source record: 44496

You canï¿½t do that as the voltage of the transformers are different !!

Best is to either series connect the transformers primaries (watch correct phasing !) and use a full wave bridge rectifier or series connect the dc-outputs of the 2 supply-circuits.
Maximum current is depending on the smaller transformer.
To find out the current rating / wattage you could measure the idling current
of the transformers, the thickness of the wires or the weight of the tranformers.
Probably with the combination of the measurements you will get near that data.

73 de Peter, DF3KV

Gary Schafer schrieb in Nachricht <3ccca63f.42733335@netnews.attbi.com>...
>It is even simpler than that. You could do what you suggested but you
>don't need the second set
>of rectifiers. Picture a standard full wave rectifier circuit with the
>transformer center tap being the
>negative output and the junction of the cathodes of the rectifiers as
>the positive output.
>Break the junction of the two cathodes and hook one cathode to one
>side of the other
>transformer and the remaining rectifiers cathode to the opposite side
>of the second transformer.
>Now your positive output is the center tap of the second transformer.
>Then negative output
>remains the center tap of the first transformer.

3255. Re: Power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 15:11:22 UTC
From: gaschafer@attbi.com
Message-ID: <3cceb4b8.2154352@netnews.attbi.com>
Source record: 44397

Sure you can do that! The reason it is done that way is precisely
because the two transformer
voltages ARE different. This circuit will allow two transformers with
any voltage differences to
add together.

Draw it out and and mark the phases of each transformer and you will
see that the two voltages
will add together to give the sum of the two transformers.

What you are talking about, putting the primaries in series, will give
half the voltage out. Then
the secondaries are still unmatched. With separate rectifiers for each
transformer it would work
by putting the two dc supplies in series but you would not want to put
the primaries in series.

It is much simpler to do it as I described with one set of rectifiers.
Of course the primaries have
to be phased properly so the output voltages add and not subtract.
(primaries are in parallel)

73
Gary K4FMX

On Tue, 30 Apr 2002 16:19:47 +0200, "Peter Voelpel"
<peter.voelpel@t-online.de> wrote:

>You can�t do that as the voltage of the transformers are different !!
>
>Best is to either series connect the transformers primaries (watch correct
>phasing !) and use a full wave bridge rectifier or series connect the
>dc-outputs of the 2 supply-circuits.
>Maximum current is depending on the smaller transformer.
>To find out the current rating / wattage you could measure the idling
>current
>of the transformers, the thickness of the wires or the weight of the
>tranformers.
>Probably with the combination of the measurements you will get near that
>data.
>
>73 de Peter, DF3KV
>
>
>Gary Schafer schrieb in Nachricht <3ccca63f.42733335@netnews.attbi.com>...
>>It is even simpler than that. You could do what you suggested but you

>>don't need the second set
>>of rectifiers. Picture a standard full wave rectifier circuit with the
>>transformer center tap being the
>>negative output and the junction of the cathodes of the rectifiers as
>>the positive output.
>>Break the junction of the two cathodes and hook one cathode to one
>>side of the other
>>transformer and the remaining rectifiers cathode to the opposite side
>>of the second transformer.
>>Now your positive output is the center tap of the second transformer.
>>Then negative output
>>remains the center tap of the first transformer.
>
>
>

3256. Re: 9:1 balun/transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 15:32:52 UTC
From: kb9olm@yahoo.com
Message-ID: <cba55a41.0204300732.1894d77e@posting.google.com>
Source record: 44398

Brian,

Mini-Circuits has a very good selection of RF transformers with
impedance ratio you are looking for: 8:1 and up to 16:1. Their RF
transformer website: http://www.minicircuits.com/transf.html
I hope you can get them through local distributors in UK. If not drop
me a note and I may help you from this side of the "water".

73,
Vlad
kb9olm
San Francisco Bay Area, California
==========

<brian@robinsonb5.fsnet.co.uk> wrote in message
news:<aalq5imfo1@newsg3.svr.pol.co.uk>...
> HI,
> I need to match a crystal filter of unknown terminal impedance possibly
> around 450/500ohms. to 50 ohms;Can anyone help, have looked at several
> sources but am confused. Thanks,
>
> Brian G4OZA

3257. DIODES?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 16:09:08 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <Ekzz8.83$qP1.5712@bgtnsc04-news.ops.worldnet.att.net>
Source record: 44399

What diodes are similar to the 1N34A?

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.350 / Virus Database: 196 - Release Date: 4/17/02

3258. Re: QUESTIONS on the noise generator in the ARRL's noise bridge circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 16:40:48 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <6ggtcug2deqahoc1sg5nbi291dsl9u7v1a@4ax.com>
Source record: 44400
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Tue, 30 Apr 2002 01:02:16 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>I don't recall the mercury-wetted relays being used for high speed step
>generation -- the earliest devices for that purpose I recall used an
>avalance transistor, step recovery diode, or tunnel diode. But I do
>recall the mercury-wetted relay being used as an "input buster", to
>produce a high speed step at the rated maximum input voltage to a scope
>input. At the time, it was about the fastest 200 or 500 volt step you
>could make.

Hi Roy,

Perhaps this was before your time, or perhaps before my memory
faded....

Anyway, I recall this application, as a standard piece of equipment
from Tektronix explicitly manufactured for the calibration of the
Sampling plug-ins 1S1 and 1S2 for the 545/547 O'Scope (ca. 1955).
Those plug-ins required substantially less than 200-500 volt inputs
(less than 2V actually or it would blow the front end).

The tunnel diodes you speak of (Tektronix (152-0125-00) 4.7ma Tunnel
Diodes) are used in the plug-ins not the calibrator.

73's
Richard Clark, KB7QHC

3259. Re: DIODES?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 18:31:11 UTC
From: Itsme <antwoord_mij@hotmail.com>
Message-ID: <3ccee2ef$0$6968$ba620e4c@news.skynet.be>
Source record: 44401

If you use them for building a Xtalradio you can use about ever
germaniumdiode.
See also http://home.t-online.de/home/gollum/hdiode.htm

73 de Jos - on7jq

"marvin rosen" <raghead@worldnet.att.net> schreef in bericht
news:Ekzz8.83$qP1.5712@bgtnsc04-news.ops.worldnet.att.net...
> What diodes are similar to the 1N34A?
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.350 / Virus Database: 196 - Release Date: 4/17/02
>
>

3260. Re: 829B / 3E29 tube Socket

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 18:57:25 UTC
From: antonelron@hotmail.com
Message-ID: <ea82a75b.0204301057.60cc65e6@posting.google.com>
Source record: 44402
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.audio.tubes,rec.radio.swap

"Carroll Conklin" <aconklin@rcn.com> wrote in message
news:<aakv47qf1@bob.news.rcn.net>...
> I have a National socket. It's for sale.
>
> Carroll
> R. Soetedjo <robi@u.washington.edu> wrote in message
> news:Pine.A41.4.44.0204291300530.18222-100000@mead5.u.washington.edu...
> > I'm looking for ceramic socket for 829B / 3E29 tube.
I think this is the same socket as a 6C33 takes.

3261. Re: How does a noise canceller work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 19:42:13 UTC
From: Dave Shrader <dshrader@earthlink.net>
Message-ID: <3CCEF35F.5FC4B1F1@earthlink.net>
Source record: 44403
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

The TNS used a different method of noise suppression. It is 100%
different from an ANC 4 or MFJ 1025/1026 device.

The TNS clipped noise spikes based on AGC voltage INSIDE the receiver.
The ANCs keep the noise from getting into the receiver!!

A former TNS user and a proud owner of the ANC 4 and former owner of the
MFJ 1025.

Dave, W1MCE

NoBody wrote:
>
> Back YEARS AGO , before the days of transistors there was a home brew
> gadget by W6TNS (?) called Twin Noise Squelch.... it used a dual triode and
> worked great in my 10 meter mobile Gonset converter into car radio in my
> 1937 Graham.... ....
>
> Bill Nelson wrote:
>
> > In rec.radio.amateur.antenna Jason Hsu <jason_hsu@my-deja.com> wrote:
> >
> > > The BIG question: Why doesn't the noise antenna receive some of the
> > > signal as well as the noise? Even if the noise antenna is much less
> > > efficient than the regular signal antenna, wouldn't this diminish the
> > > noise received as well as the signal received?
> >
> > It may do so - so what? If the desired signal is that strong, then
> > reducing it a bit is not going to hurt.
> >
> > Or you can adjust the noise antenna gain until the desired signal is
> > not reduced. The result would be a compromise on noise reduction.
> >
> > The whole system works when there is a different S/N ratio between
> > the two antennas. If they are the same - as is often the case with
> > DX noise, then there is little or no noise reduction possible by
> > such simple signal inversion.
> >
> > --
> > Bill Nelson (billn@peak.org)

3262. Germanium Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 20:42:03 UTC
From: Mark Hall <vze2mhvc@bellatlantic.net>
Message-ID: <3CCF0055.3DE46755@bellatlantic.net>
Source record: 44404

Not too many.. those are germanium signal diodes with a Vforward of about 0.3V.. I believe the 1N90 is also germanium. You might consider schottky diodes which have a Vf of around 0.4 volts, but probably won't work very well as an AM detector. Standard silicon diodes (such as !N4148)have a Vf of 0.6 volts or more. Any Germanium signal diode should have similar characteristics to the 1N34. Not too many around these days, but you might get lucky.

'73 KI4Z

3263. Was PWM AM

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 21:21:31 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <in43lPBbrwz8Ew3h@fslife.co.uk>
Source record: 44443

Jack,

>Lenny, I didn't find info on PWM at the amwindow.org address. Can you
give
>me a pointer?

You'll find what you need to know here on Steve's site:

http://www.netway.com/~stevec/ham/

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3264. Re: How does a noise canceller work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 21:52:45 UTC
From: Dale J <dj2001@mn.rr.com>
Message-ID: <dj2001-D5EFE0.16520730042002@apollo-ge0.rdc-kc.rr.com>
Source record: 44405
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Dave Shrader <dshrader@earthlink.net> wrote:

former owner of the
MFJ 1025.

I just picked up on this so I may be missing somthing, but why did you get rid of the MFJ1025? Reason for asking I am thinking about purchasing it or the Timewave ANC4. You being a owner of both which do you recomend if I may ask.

Dale
K9VUJ

3265. Re: 829B / 3E29 tube Socket

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 22:29:11 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <XUEz8.2621$_j4.64496@news1.east.cox.net>
Source record: 44406
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.audio.tubes,rec.radio.swap

A 5894 socket should also work (ditto for an 832.) Watch for used damaged
GE base transmitter strips that use the 5894 in the final.

Peter

"R. Soetedjo" <robi@u.washington.edu> wrote in message
news:Pine.A41.4.44.0204291300530.18222-100000@mead5.u.washington.edu...
> I'm looking for ceramic socket for 829B / 3E29 tube.
>
> thanks
> rob
>

3266. Re: DIODES?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 23:28:07 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3CCF267B.A324D188@bellatlantic.net>
Source record: 44407

marvin rosen wrote:
>
> What diodes are similar to the 1N34A?

I think a 1N60 is similar.
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.350 / Virus Database: 196 - Release Date: 4/17/02

3267. Re: How does a noise canceller work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 23:31:15 UTC
From: Dave Shrader <dshrader@earthlink.net>
Message-ID: <3CCF28FD.D5CDE45B@earthlink.net>
Source record: 44408
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I live about 100 meters from 3 sets of 3 phase lines, 66 kv, 88 kv and 105 kv, on the New England Power Grid. I am about 1/4 mile from a substation and 3 miles from a major power generating station on the NE Grid. Potential for lots of line noise and insulator noise.

The MFJ 1025 does not have a preamplifier and was not sensitive enough for my needs. BTW, the 1026 has a preamplifier but I have not used that model.

I picked up the Timewave on eBay for $60 to give it a try. With a small dipole [12 feet] about 1 foot above ground level I can null out S8 power line and insulator noise. This meets my needs. The MFJ 1025 just will not do that at my installation.

73, Deacon Dave, W1MCE

Dale J wrote:
>
> Dave Shrader <dshrader@earthlink.net> wrote:
>
> former owner of the
> MFJ 1025.
>
> I just picked up on this so I may be missing somthing, but why did you
> get rid of the MFJ1025? Reason for asking I am thinking about
> purchasing it or the Timewave ANC4. You being a owner of both which do
> you recomend if I may ask.
>
> Dale
> K9VUJ

3268. Re: DIODES?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-04-30 23:57:06 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <mbGz8.606$n7.79950@bin8.nnrp.aus1.giganews.com>
Source record: 44409

The 1N270 is a great substitute for the 1N34.

3269. First HB receiver, synchronous detection??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 00:04:04 UTC
From: John <john@clavin.freeserve.co.uk>
Message-ID: <aanbuc$e8o$1@news5.svr.pol.co.uk>
Source record: 44410

Hi Guys,

I'm about to embark on my first RX project, 5.80 - 14.0 Mhz AM only . The basic lineup (for a basic RX) is... pre-selector, Variable RF amp, second stage pre-selector, fixed gain RF amp (only if needed) to feed TAK-893 level 17 passive DBM, (LO with high level drive), IF out to tuned IF amp, 455khz (6khz BW) high quality ceramic filter, tuned IF amp, detector, switched capacitor audio filter with notch filter and AF pre and pwr amps.

But I'm thinking of detection now. Is it worth my while trying to implement a simple-ish synchronous detector? Ive heard that this method is well worth the extra effort. Also, Ive read that basically, a tuned limiting amp is used to re-create the carrier, but with detection happening at IF, isnt it just a matter of mixing a carrier at the IF frequency? i.e in my case mixing a carrier of 455khz with a second double balanced mixer to resolve the audio?

Apologies if any of the above sounds amateurish, but thats what I am. And as such, any and all suggestions would be very welcome. Oh, Ive chosen 455khz as the IF, because then my 2 RF preselectors and Local Oscillator can be tuned with a 3 stage variable cap without much of a "tracking" error. Any image problem resulting from the low IF, should have been minimised by the sturdy front-end anyway.

All suggestions welcome....

John.

3270. Re: Power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 00:23:57 UTC
From: keven <keven@nospamoceanwide.co.nz>
Message-ID: <3ccf34b2@news.nz.asiaonline.net>
Source record: 44411

Gary Schafer wrote:

> Sure you can do that! The reason it is done that way is precisely
> because the two transformer
> voltages ARE different. This circuit will allow two transformers with
> any voltage differences to
> add together.
>
> Draw it out and and mark the phases of each transformer and you will
> see that the two voltages
> will add together to give the sum of the two transformers.
>
> What you are talking about, putting the primaries in series, will give
> half the voltage out. Then
> the secondaries are still unmatched. With separate rectifiers for each
> transformer it would work
> by putting the two dc supplies in series but you would not want to put
> the primaries in series.
>
> It is much simpler to do it as I described with one set of rectifiers.
> Of course the primaries have
> to be phased properly so the output voltages add and not subtract.
> (primaries are in parallel)
>
> 73
> Gary K4FMX
>
>
> On Tue, 30 Apr 2002 16:19:47 +0200, "Peter Voelpel"
> <peter.voelpel@t-online.de> wrote:
>
>>You canï¿œt do that as the voltage of the transformers are different !!
>>
>>Best is to either series connect the transformers primaries (watch
>>correct phasing !) and use a full wave bridge rectifier or series connect
>>the dc-outputs of the 2 supply-circuits.
>>Maximum current is depending on the smaller transformer.
>>To find out the current rating / wattage you could measure the idling
>>current
>>of the transformers, the thickness of the wires or the weight of the
>>tranformers.
>>Probably with the combination of the measurements you will get near that
>>data.
>>

>>73 de Peter, DF3KV
>>
>>
>>Gary Schafer schrieb in Nachricht <3ccca63f.42733335@netnews.attbi.com>...
>>>It is even simpler than that. You could do what you suggested but you
>>>don't need the second set
>>>of rectifiers. Picture a standard full wave rectifier circuit with the
>>>transformer center tap being the
>>>negative output and the junction of the cathodes of the rectifiers as
>>>the positive output.
>>>Break the junction of the two cathodes and hook one cathode to one
>>>side of the other
>>>transformer and the remaining rectifiers cathode to the opposite side
>>>of the second transformer.
>>>Now your positive output is the center tap of the second transformer.
>>>Then negative output
>>>remains the center tap of the first transformer.
>>
>>
>>
Yes it does work. I tryed it this afternoon and it worked verry well.
But I still don't know what the current rating is.

73
Kev

3271. Re: 829B / 3E29 tube Socket

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 01:48:23 UTC
From: Joe Curry <jjcurry_trilix@compuserve.com>
Message-ID: <aanj7n$d57$1@suaar1ac.prod.compuserve.com>
Source record: 44413
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.audio.tubes,rec.radio.swap

Try Antique Electronics Supply (P/N P-ST7-310) @ $4.25 each.
Contact at: www.tubesandmore.com

73,
Joe
K3ICO

> "R. Soetedjo" <robi@u.washington.edu> wrote in message
> news:Pine.A41.4.44.0204291300530.18222-100000@mead5.u.washington.edu...
> > I'm looking for ceramic socket for 829B / 3E29 tube.
> >
> > thanks
> > rob
> >
>
>

3272. Re: Power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 02:13:30 UTC
From: Gollywog <_eng@ilos.net>
Message-ID: <eblz8.2357$GG6.118272@news3.calgary.shaw.ca>
Source record: 44412

"keven" <keven@nospamoceanwide.co.nz> wrote in message
news:3ccf34b2@news.nz.asiaonline.net...
> Gary Schafer wrote:
>
> > Sure you can do that!
<snip>

> >
> > On Tue, 30 Apr 2002 16:19:47 +0200, "Peter Voelpel"
> > <peter.voelpel@t-online.de> wrote:
> >
> >>You can't do that as the voltage of the transformers are different !!
> >>

<snip>
> >>
> >>Gary Schafer schrieb in Nachricht
<3ccca63f.42733335@netnews.attbi.com>...
> >>>It is even simpler than that. You could do what you suggested but you
> >>>don't need the second set
> >>>of rectifiers. Picture a standard full wave rectifier circuit with the
> >>>transformer center tap being the
> >>>negative output and the junction of the cathodes of the rectifiers as
> >>>the positive output.
> >>>Break the junction of the two cathodes and hook one cathode to one
> >>>side of the other
> >>>transformer and the remaining rectifiers cathode to the opposite side
> >>>of the second transformer.
> >>>Now your positive output is the center tap of the second transformer.
> >>>Then negative output
> >>>remains the center tap of the first transformer.
> >>
> >>
> >>

> Yes it does work. I tryed it this afternoon and it worked verry well.
> But I still don't know what the current rating is.
>
> 73
> Kev

I've included what I got from reading the explanation of the unmatched
transformer case in an updated schematic at
http://www.ilos.net/~eng/psupply2.gif
Is this what you just tried?

I thought I knew how to determine transformer rated current but since no one else has told you I wonder now if I'm right. My problem was to find a transformer (in my junk box) which could deliver 20+ amps without the AC voltage at it's terminals falling to a level which put my not-so-low drop out regulator out of business. I got four 200W resistors each having a sliding band along the outside to adjust the resistance. I found if I slowly increased the current load and plotted the AC voltage apparent at the terminals I could detect a rather abrupt knee in the curve. I assumed this was where the core was reaching saturation and thus was a bit past the rated current level. Perhaps someone can say if this was an unrelated observation or not.

Mike

********* \\\\lll//// *********
********** \ -- -- / **********
*********** (\@ @/) ***********
*** --oOOOo---(_)---oOOOo-- ***
Real men edit the registry.

3273. Re: WANTED: schematic for HF noise canceller (like the MFJ-1026)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 02:43:51 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3ccf5a31_1@news1.prserv.net>
Source record: 44414
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Jason:

I recall, perhaps incorrectly, that you graduated from an engineering school last year or maybe this year. If that is so, you are sure not giving the school a very good reputation. In my senior year in Physics, we were expected to be able to do exactly what you are asking someone else to do, i. e. draw a block diagram of a system based on the intended application, describe the functionality of each block, and then design a circuit to fit in each block. That was 40 years ago, actually closer to 50. Have college standards dropped that much? All the old profs must be turning over in their graves. :-((

--
Crazy George
Remove NO and SPAM from return address
Jason Hsu <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0204291232.20f95fb6@posting.google.com...
> Where can I find a schematic for a noise canceller for HF? I would
> like to homebrew a noise canceller/preamplifier that would be similar
> to the MFJ-1026. (Unfortunately, the MFJ manuals available online
> don't include the schematic.)
>
> I would particularly appreciate an explanation on how the various
> parts of the circuit work (noise amplifier, noise phase shifter,
> signal preamplifier, filters, etc.) and the transformer specifications
> I need (so that I can use something available to me).
>
> Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com
> http://www.jasonhsu.com/ham_radio-technical.html

3274. 6 Meter Project for Sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 03:05:06 UTC
From: Dan Reynolds <bcdlr@insightbb.com>
Message-ID: <CXIz8.184886$CH1.136420@sccrnsc02>
Source record: 44415
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

6 meter AM transceiver put out by the Iowa QRP club. I have the board, the pots, a used CB modulation transformer, the modulator chip, the crystal filter (the good one), and the coil form. I'm thinking $35 plus shipping or make me an offer, or trade for a good SSB audio filter... I can do PayPal.

Dan Reynolds KB9JLO

3275. Re: WANTED: schematic for HF noise canceller (like the MFJ-1026)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 03:06:52 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <9jmucu8evf0uk2lauili3f9g59798gq3pp@4ax.com>
Source record: 44416
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

On Tue, 30 Apr 2002 21:43:51 -0500, "Crazy George"
<munschNO@attglobal.net.SPAM> wrote:

>Jason:
>
>I recall, perhaps incorrectly, that you graduated from an engineering school
>last year or maybe this year. If that is so, you are sure not giving the
>school a very good reputation. In my senior year in Physics, we were
>expected to be able to do exactly what you are asking someone else to do, i.
>e. draw a block diagram of a system based on the intended application,
>describe the functionality of each block, and then design a circuit to fit
>in each block. That was 40 years ago, actually closer to 50. Have college
>standards dropped that much? All the old profs must be turning over in
>their graves. :-((
>
>--
>Crazy George

Now don't go Crazy, George,

Jason long ago 'fessed up he did good in getting high grades without
getting too deep into understanding the theory (certainly a talent).
Support his "born again" fervor now that he cares about how things
work. There are other, unrepentant sinners who thump their test
scores at the bewildered to prove their piety. ;-)

73's
Richard Clark, KB7QHC

3276. Re: First HB receiver, synchronous detection??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 03:14:34 UTC
From: gaschafer@attbi.com
Message-ID: <3ccf5e4f.2210117@netnews.attbi.com>
Source record: 44417

Even with a good pre selector I think that you are going to have image
problems with the 455
kc IF. You could probably get by with it up through about 7 mc or so
but at 14 mc you will
probably have images. I would use double conversion with a higher
first IF. Around 1.5 to 2
mhz should work ok. Or a tunable first IF and a crystal controlled
first mixer.

On the synchronous detector it sounds like you have it about right. It
works like a product
detector for ssb but the trick is that the inserted carrier has to be
exactly in phase with the
received signal carrier. That can be derived in a few different ways
from using a phase lock loop
on the received signal to running a sample of the received signal into
a limiter or using the two
side bands of the am signal to make a carrier to feed to the product
detector. Each has it's
problems. I would get it going with a regular diode detector first
then play with the synchronous
detector.

73
Gary K4FMX

On Wed, 1 May 2002 01:04:04 +0100, "John"
<john@clavin.freeserve.co.uk> wrote:

>Hi Guys,
>
>I'm about to embark on my first RX project, 5.80 - 14.0 Mhz AM only . The
>basic lineup (for a basic RX) is... pre-selector, Variable RF amp, second
>stage pre-selector, fixed gain RF amp (only if needed) to feed TAK-893
>level 17 passive DBM, (LO with high level drive), IF out to tuned IF amp,
>455khz (6khz BW) high quality ceramic filter, tuned IF amp, detector,
>switched capacitor audio filter with notch filter and AF pre and pwr amps.
>
>But I'm thinking of detection now. Is it worth my while trying to implement
>a simple-ish synchronous detector? Ive heard that this method is well worth
>the extra effort. Also, Ive read that basically, a tuned limiting amp is
>used to re-create the carrier, but with detection happening at IF, isnt it
>just a matter of mixing a carrier at the IF frequency? i.e in my case mixing
>a carrier of 455khz with a second double balanced mixer to resolve the
>audio?

>
>Apologies if any of the above sounds amateurish, but thats what I am. And as
>such, any and all suggestions would be very welcome. Oh, Ive chosen 455khz
>as the IF, because then my 2 RF preselectors and Local Oscillator can be
>tuned with a 3 stage variable cap without much of a "tracking" error. Any
>image problem resulting from the low IF, should have been minimised by the
>sturdy front-end anyway.
>
>All suggestions welcome....
>
>John.
>
>

3277. Re: Power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 03:22:34 UTC
From: gaschafer@attbi.com
Message-ID: <3ccf601f.2673945@netnews.attbi.com>
Source record: 44418

On Wed, 01 May 2002 12:23:57 +1200, keven
<keven@nospamoceanwide.co.nz> wrote:

>Gary Schafer wrote:
>
>> Sure you can do that! The reason it is done that way is precisely
>> because the two transformer
>> voltages ARE different. This circuit will allow two transformers with
>> any voltage differences to
>> add together.
>>
>> Draw it out and and mark the phases of each transformer and you will
>> see that the two voltages
>> will add together to give the sum of the two transformers.
>>
>> What you are talking about, putting the primaries in series, will give
>> half the voltage out. Then
>> the secondaries are still unmatched. With separate rectifiers for each
>> transformer it would work
>> by putting the two dc supplies in series but you would not want to put
>> the primaries in series.
>>
>> It is much simpler to do it as I described with one set of rectifiers.
>> Of course the primaries have
>> to be phased properly so the output voltages add and not subtract.
>> (primaries are in parallel)
>>
>> 73
>> Gary K4FMX
>>
>>
>> On Tue, 30 Apr 2002 16:19:47 +0200, "Peter Voelpel"
>> <peter.voelpel@t-online.de> wrote:
>>
>>>You can't do that as the voltage of the transformers are different !!
>>>
>>>Best is to either series connect the transformers primaries (watch
>>>correct phasing !) and use a full wave bridge rectifier or series connect
>>>the dc-outputs of the 2 supply-circuits.
>>>Maximum current is depending on the smaller transformer.
>>>To find out the current rating / wattage you could measure the idling
>>>current
>>>of the transformers, the thickness of the wires or the weight of the

>>>tranformers.
>>>Probably with the combination of the measurements you will get near that
>>>data.
>>>
>>>73 de Peter, DF3KV
>>>
>>>
>>>Gary Schafer schrieb in Nachricht <3ccca63f.42733335@netnews.attbi.com>...
>>>>It is even simpler than that. You could do what you suggested but you
>>>>don't need the second set
>>>>of rectifiers. Picture a standard full wave rectifier circuit with the
>>>>transformer center tap being the
>>>>negative output and the junction of the cathodes of the rectifiers as
>>>>the positive output.
>>>>Break the junction of the two cathodes and hook one cathode to one
>>>>side of the other
>>>>transformer and the remaining rectifiers cathode to the opposite side
>>>>of the second transformer.
>>>>Now your positive output is the center tap of the second transformer.
>>>>Then negative output
>>>>remains the center tap of the first transformer.
>>>
>>>
>>>
> Yes it does work. I tryed it this afternoon and it worked verry well.
> But I still don't know what the current rating is.
>
>73
>Kev

If you have an ARRL handbook, in the power supply section they tell
you how to roughly
determine the power ratting of a transformer by the cross section size
of the core.

If you can measure the wire size of the secondary wire on the
transformer you can also look in
the handbook on wire size in transformers and it will give the current
ratting when used in a
transformer. The problem is though that most of the time the wire
comes out with a pigtail of
stranded wire that is not what the transformer is wound with. So the
best bet is probably trying
to determine from core size. I used to know the approximate figures
but can't remember.

I take it that you are just using 2 diodes in a full wave circuit with
the two transformers and not a
bridge circuit like that of the drawing that the other poster shows.

73
Gary K4FMX

3278. Re: Power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 04:01:36 UTC
From: gaschafer@attbi.com
Message-ID: <3ccf6920.4978930@netnews.attbi.com>
Source record: 44419

On Wed, 01 May 2002 02:13:30 GMT, "Gollywog" <_eng@ilos.net> wrote:

>
>"keven" <keven@nospamoceanwide.co.nz> wrote in message
>news:3ccf34b2@news.nz.asiaonline.net...
>> Gary Schafer wrote:
>>
>> > Sure you can do that!
><snip>
>
>> >
>> > On Tue, 30 Apr 2002 16:19:47 +0200, "Peter Voelpel"
>> > <peter.voelpel@t-online.de> wrote:
>> >
>> >>You can't do that as the voltage of the transformers are different !!
>> >>
>
><snip>
>> >>
>> >>Gary Schafer schrieb in Nachricht
><3ccca63f.42733335@netnews.attbi.com>...
>> >>>It is even simpler than that. You could do what you suggested but you
>> >>>don't need the second set
>> >>>of rectifiers. Picture a standard full wave rectifier circuit with the
>> >>>transformer center tap being the
>> >>>negative output and the junction of the cathodes of the rectifiers as
>> >>>the positive output.
>> >>>Break the junction of the two cathodes and hook one cathode to one
>> >>>side of the other
>> >>>transformer and the remaining rectifiers cathode to the opposite side
>> >>>of the second transformer.
>> >>>Now your positive output is the center tap of the second transformer.
>> >>>Then negative output
>> >>>remains the center tap of the first transformer.
>> >>
>> >>
>> >>
>
>> Yes it does work. I tryed it this afternoon and it worked verry well.
>> But I still don't know what the current rating is.
>>
>> 73
>> Kev

>
>I've included what I got from reading the explanation of the unmatched
>transformer case in an updated schematic at
>http://www.ilos.net/~eng/psupply2.gif
>Is this what you just tried?
>
>I thought I knew how to determine transformer rated current but since no one
>else has told you I wonder now if I'm right. My problem was to find a
>transformer (in my junk box) which could deliver 20+ amps without the AC
>voltage at it's terminals falling to a level which put my not-so-low drop
>out regulator out of business. I got four 200W resistors each having a
>sliding band along the outside to adjust the resistance. I found if I slowly
>increased the current load and plotted the AC voltage apparent at the
>terminals I could detect a rather abrupt knee in the curve. I assumed this
>was where the core was reaching saturation and thus was a bit past the rated
>current level. Perhaps someone can say if this was an unrelated observation
>or not.
>
>Mike
>

Mike,

You don't want to ground the center tap on the transformer and use a bridge rectifier at the
same time. You will have a dead short! Either use the bridge rectifier and no center tap or use a
full wave rectifier (2 diodes) and the center tap. By the way 2 of your diodes are backwards in
the bridge.

In the second diagram of the two transformers that are not alike, use just a full wave rectifier (2
diodes). Get rid of d1 and d2 and the ground on them. Use your d3 and d4 only. But they are
backwards also. You would have a positive ground supply the way they are shown.

73
Gary K4FMX

3279. Re: Power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 07:05:14 UTC
From: keven <keven@nospamoceanwide.co.nz>
Message-ID: <3ccf92bf@news.nz.asiaonline.net>
Source record: 44420

Gary Schafer wrote:

> On Wed, 01 May 2002 12:23:57 +1200, keven
> <keven@nospamoceanwide.co.nz> wrote:
>
>>Gary Schafer wrote:
>>
>>> Sure you can do that! The reason it is done that way is precisely
>>> because the two transformer
>>> voltages ARE different. This circuit will allow two transformers with
>>> any voltage differences to
>>> add together.
>>>
>>> Draw it out and and mark the phases of each transformer and you will
>>> see that the two voltages
>>> will add together to give the sum of the two transformers.
>>>
>>> What you are talking about, putting the primaries in series, will give
>>> half the voltage out. Then
>>> the secondaries are still unmatched. With separate rectifiers for each
>>> transformer it would work
>>> by putting the two dc supplies in series but you would not want to put
>>> the primaries in series.
>>>
>>> It is much simpler to do it as I described with one set of rectifiers.
>>> Of course the primaries have
>>> to be phased properly so the output voltages add and not subtract.
>>> (primaries are in parallel)
>>>
>>> 73
>>> Gary K4FMX
>>>
>>>
>>> On Tue, 30 Apr 2002 16:19:47 +0200, "Peter Voelpel"
>>> <peter.voelpel@t-online.de> wrote:
>>>
>>>>You canï¿œt do that as the voltage of the transformers are different !!
>>>>
>>>>Best is to either series connect the transformers primaries (watch
>>>>correct phasing !) and use a full wave bridge rectifier or series
>>>>connect the dc-outputs of the 2 supply-circuits.
>>>>Maximum current is depending on the smaller transformer.
>>>>To find out the current rating / wattage you could measure the idling
>>>>current

>>>>of the transformers, the thickness of the wires or the weight of the
>>>>tranformers.
>>>>Probably with the combination of the measurements you will get near
>>>>that data.
>>>>
>>>>73 de Peter, DF3KV
>>>>
>>>>
>>>>Gary Schafer schrieb in Nachricht
>>>><3ccca63f.42733335@netnews.attbi.com>...
>>>>>It is even simpler than that. You could do what you suggested but you
>>>>>don't need the second set
>>>>>of rectifiers. Picture a standard full wave rectifier circuit with the
>>>>>transformer center tap being the
>>>>>negative output and the junction of the cathodes of the rectifiers as
>>>>>the positive output.
>>>>>Break the junction of the two cathodes and hook one cathode to one
>>>>>side of the other
>>>>>transformer and the remaining rectifiers cathode to the opposite side
>>>>>of the second transformer.
>>>>>Now your positive output is the center tap of the second transformer.
>>>>>Then negative output
>>>>>remains the center tap of the first transformer.
>>>>
>>>>
>>>>
>>> Yes it does work. I tryed it this afternoon and it worked verry well.
>>> But I still don't know what the current rating is.
>>
>>73
>>Kev
>
>
> If you have an ARRL handbook, in the power supply section they tell
> you how to roughly
> determine the power ratting of a transformer by the cross section size
> of the core.
>
> If you can measure the wire size of the secondary wire on the
> transformer you can also look in
> the handbook on wire size in transformers and it will give the current
> ratting when used in a
> transformer. The problem is though that most of the time the wire
> comes out with a pigtail of
> stranded wire that is not what the transformer is wound with. So the
> best bet is probably trying
> to determine from core size. I used to know the approximate figures
> but can't remember.
>
> I take it that you are just using 2 diodes in a full wave circuit with

> the two transformers and not a
> bridge circuit like that of the drawing that the other poster shows.
>
> 73
> Gary K4FMX

Yes I am useing just the 2 diodes in a full wave circuit. The center tap of one transformer is negative and the centertap on the other transformer is positive. Another thing I did this afternoon was take some BIG hi wattage resistors and put them across the outputs of the transformers (centertaps) with an ammeter.I just kepted reduceing the resistance untell I saw a voltage drop. I was able to see just over 800Ma befor seeing any voltage drop at all. About 1500 volts.

What I'm hopeing to use this power supply for is a plate supply for 2X4cx250.

73
Kev

3280. Re: DIODES?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 08:07:48 UTC
From: la8ak.xnd@online.no
Message-ID: <3ccf2688.22656025@news.online.no>
Source record: 44421

On Tue, 30 Apr 2002 16:09:08 GMT, "marvin rosen"
<raghead@worldnet.att.net> wrote:

>What diodes are similar to the 1N34A?
>
>
OA81 if you need such old device
--
remove ,xnd to reply

3281. Re: DIODES?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 08:07:49 UTC
From: la8ak.xnd@online.no
Message-ID: <3ccf26c9.22720932@news.online.no>
Source record: 44422

On Tue, 30 Apr 2002 20:31:11 +0200, "Itsme" <antwoord_mij@hotmail.com>
wrote:

>If you use them for building a Xtalradio you can use about ever
>germaniumdiode.
>See also http://home.t-online.de/home/gollum/hdiode.htm
>
>73 de Jos - on7jq
>
AAZ17 may be about most sensitive, and AA119 works up to above 2.4GHz
with good sensitivity on HF as well as VHF/UHF

73
LA8AK
--
remove ,xnd to reply

3282. Re: How does a noise canceller work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 08:27:17 UTC
From: Dale J <dj2001@mn.rr.com>
Message-ID: <dj2001-1F63A5.03265201052002@apollo-ge0.rdc-kc.rr.com>
Source record: 44423
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

In article <3CCF28FD.D5CDE45B@earthlink.net>,
Dave Shrader <dshrader@earthlink.net> wrote:

> I live about 100 meters from 3 sets of 3 phase lines, 66 kv, 88 kv and
> 105 kv, on the New England Power Grid. I am about 1/4 mile from a
> substation and 3 miles from a major power generating station on the NE
> Grid. Potential for lots of line noise and insulator noise.
>
> The MFJ 1025 does not have a preamplifier and was not sensitive enough
> for my needs. BTW, the 1026 has a preamplifier but I have not used that
> model.
>
> I picked up the Timewave on eBay for $60 to give it a try. With a small
> dipole [12 feet] about 1 foot above ground level I can null out S8 power
> line and insulator noise. This meets my needs. The MFJ 1025 just will
> not do that at my installation.
>
> 73, Deacon Dave, W1MCE

Thanks for the info. I was not aware of the 1026.

It sounds like the jps works for you.

73
Dale

3283. Re: Power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 10:13:39 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <nBijfXBT$7z8EA1R@ifwtech.co.uk>
Source record: 44424

keven wrote:

> I was able to see just over 800Ma befor seeing any voltage drop at
>all. About 1500 volts.
>
>What I'm hopeing to use this power supply for is a plate supply for
>2X4cx250.
>
4CX250s do not perform well at 1500V. They improve remarkably at 2000V, in terms of both power output and linearity. Aim for an absolute minimum of 1800V at full load - anything less will be a disappointment, and a waste of your time.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
New e-mail: g3sek@ifwtech.co.uk
New website: http://www.ifwtech.co.uk/g3sek

3284. Re: Power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 10:55:52 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <4jZz8.474$rO2.184682@news6-win.server.ntlworld.com>
Source record: 44444

> I thought I knew how to determine transformer rated current but since no
one
> else has told you I wonder now if I'm right. My problem was to find a
> transformer (in my junk box) which could deliver 20+ amps without the AC
> voltage at it's terminals falling to a level which put my not-so-low drop
> out regulator out of business. I got four 200W resistors each having a
> sliding band along the outside to adjust the resistance. I found if I
slowly
> increased the current load and plotted the AC voltage apparent at the
> terminals I could detect a rather abrupt knee in the curve. I assumed this
> was where the core was reaching saturation and thus was a bit past the
rated
> current level. Perhaps someone can say if this was an unrelated
observation
> or not.
==========
If a transformer is well designed , eg iron and windings (diameter) match ,
the current rating can be found by loading the transformer until de output
voltage has dropped by 5 percent. This is a practical way ,be it NOT
scientific . For a HV transformer the load can be made from high power
resistors or a number of 120 or 230 V lamps in series . Especially the
latter method requires ample safety consciousness.
A Variac (variable auto-transformer) in the 230/117 V primary circuit will
be very useful while performing the test.

Frank gm0csz.kn6wh@ntlworld.com

3285. Re: First HB receiver, synchronous detection??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 11:51:11 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <gikvcu85qdj9atol8e9m2gfana6gmj94ei@4ax.com>
Source record: 44425

John said
>But I'm thinking of detection now. Is it worth my while trying to implement
>a simple-ish synchronous detector? Ive heard that this method is well worth
>the extra effort. Also, Ive read that basically, a tuned limiting amp is
>used to re-create the carrier, but with detection happening at IF, isnt it
>just a matter of mixing a carrier at the IF frequency? i.e in my case mixing
>a carrier of 455khz with a second double balanced mixer to resolve the
>audio?
>
Curiously enough, I've been working on a similar project for a few weeks, but double conversion. Right now, I've got the AF amplifier, detector, AGC amp and one 455 KHz IF stage built and working, so I've got a long way to go.

I decided to start with a simple 455 KHz envelope detector, with the plan to build in a modular fashion so that I could add synchronous detector after the rest of the receiver is working.

After trying three different envelope detectors, I found the best performance, in terms of THD, with what Walter Jung's Op Amp Cookbook describes as a "semi-precision rectifier" using a TL074 quad op amp and 1N270 rectifiers. I also take a feed off this detector for my AGC bus. I measured the THD as 0.6% with this circuit, for a 1000 Hz modulating tone at 95% modulation. That's the limit of my signal generator, so the detector may actually be better.

The circuit is shown in recent ARRL handbooks, Figure 17.31 in the 2000 edition shows it used purely as an AGC detector. Searching around the internet for "precision rectifier op amp," I found the underlying circuit in many places, such as Figure 8.3 in newton.ex.ac.uk/teaching/CDHW/Electronics2/PHY2003-08.pdf

I first used 1N914 silicon diodes, as usually recommended, and found that I couldn't get the distortion below 3% or so. Switched to germanium 1N270 diodes and saw the THD drop to around 0.6%.

If you are interested, I'll e-mail you a copy of the schematic. Drop me an e-mail if you want it.

Jack K8ZOA

3286. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 12:14:47 UTC
From: Lenny Boutin <lboutin@whoi.edu>
Message-ID: <3CCFDC37.68FBEE87@whoi.edu>
Source record: 44426
Body handling: Binary attachment payload not displayed: lboutin.vcf

Yup, There is activity on AM on all bands. Yes, there are people using
400W Class E MOSFET amps modulated by PWM modulators. Plans to build them
are the following website: http://www.amwindow.org. Check it out!
Hope this helps, LennyB, W1REA

"r.crowley" wrote:

> Is this method used anywhere? With modern digital circuitry, it seems
> almost easier to do than traditional methods of amplitude modulation.
> (Assuming appropriate filtering to produce proper sine-wave output, not
> square wave!)
>
> Is there any AM activity on amateur bands anymore?

[One or more binary attachments are retained only in the source text.]

3287. Re: How does a noise canceller work? - audio proc often too late

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 13:59:00 UTC
From: G Blair <gblair@sympatico.ca>
Message-ID: <3CCFF4A4.8109F33E@sympatico.ca>
Source record: 44427
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Dave Shrader wrote:

> I live about 100 meters from 3 sets of 3 phase lines, 66 kv, 88 kv and
> 105 kv, on the New England Power Grid. I am about 1/4 mile from a
> substation and 3 miles from a major power generating station on the NE
> Grid. Potential for lots of line noise and insulator noise.

WOW!

> I picked up the Timewave on eBay for $60 to give it a try. With a small
> dipole [12 feet] about 1 foot above ground level I can null out S8 power
> line and insulator noise. This meets my needs. The MFJ 1025 just will
> not do that at my installation.

If the noise saturates or overloads the detector, audio processing is often too late in the receiver chain to fix noise. There is nothing to recover if there is not any signal left after the detector. It all depends on what is going on at the detector stage.

Remember all those impulse noise reduction circuits that detected an impulse and reduced the RF/IF gain for the duration of the impulse? They worked pretty good, didn't they?

[Why does pressing the noise reduction button on a TS50S work a lot better than pressing the same button on a commercial marine ICOM M710 SSB?]

One can download for free a audio filtering app complete with source code for the Analog Devices 21xx DSP dev kit that does a lot of reasonable DSP audio things.

3288. Re: Power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 14:31:32 UTC
From: Peter Voelpel <peter.voelpel@t-online.de>
Message-ID: <aaoubolsr03$1@news.t-online.com>
Source record: 44428

Gary Schafer schrieb in Nachricht <3cceb4b8.2154352@netnews.attbi.com>...
>Sure you can do that! The reason it is done that way is precisely
>because the two transformer
>voltages ARE different. This circuit will allow two transformers with
>any voltage differences to add together.

The phases are adding correctly, but what about the current ?
I understand that the current of one transformer is also flowing
through the opposite winding and so probably reduce the
allowable current to a lower value then using the transformer alone ?

>What you are talking about, putting the primaries in series, will give
>half the voltage out. Then

Right, I was thinking of course of putting the secondaries in series..
with the primaries in parallel
and use then a full-wave bridge rectifier (4 diodes)
giving me about 3450 Volts idling voltage at the smoothing capacitor.

In the past I was using a HF-amplifier with 3 x 4CX350F at 4KV
anodevoltage very succesfully.
4KV was noload, 3,4KV at full output
With voltages at less then 2500V they draw grid-current very quickly
and efficiency was not as high as expected...

Peter, DF3KV

3289. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 16:13:13 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <aap46p$ep4$0@206.102.192.106>
Source record: 44429

Lenny, I didn't find info on PWM at the amwindow.org address. Can you give me a pointer?

73 de Jack

Lenny Boutin wrote in message <3CCFDC37.68FBEE87@whoi.edu>...
>Yup, There is activity on AM on all bands. Yes, there are people using
>400W Class E MOSFET amps modulated by PWM modulators. Plans to build them
>are the following website: http://www.amwindow.org. Check it out!
>Hope this helps, LennyB, W1REA
>
>"r.crowley" wrote:
>
>> Is this method used anywhere? With modern digital circuitry, it seems
>> almost easier to do than traditional methods of amplitude modulation.
>> (Assuming appropriate filtering to produce proper sine-wave output, not
>> square wave!)
>>
>> Is there any AM activity on amateur bands anymore?
>

3290. Re: Power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 16:14:03 UTC
From: gaschafer@attbi.com
Message-ID: <3cd014c3.5743145@netnews.attbi.com>
Source record: 44430

On Wed, 1 May 2002 16:31:32 +0200, "Peter Voelpel"
<peter.voelpel@t-online.de> wrote:

>The phases are adding correctly, but what about the current ?
>I understand that the current of one transformer is also flowing
>through the opposite winding and so probably reduce the
>allowable current to a lower value then using the transformer alone ?

>What you are talking about, putting the primaries in series, will give
>half the voltage out. Then

>Right, I was thinking of course of putting the secondaries in series..
>ith the primaries in parallel
>and use then a full-wave bridge rectifier (4 diodes)
>giving me about 3450 Volts idling voltage at the smoothing capacitor.

>Peter, DF3KV

Yes Peter, the total current will flow through both transformers but
the current will be no
different than if the transformers are in series. In series the total
current also flows through both
transformers. These transformers are effectivly in series when the
diode conducts so the same
current flows through both.

Your methode of hooking the secondaries in series and using a bridge
rectifier is fine also. But
with a bridge you get twice the voltage that you do with a full wave
circuit. sometimes a bridge
may give too much voltage with the two transformers in series. This is
just another way to use
two oddball transformers together.

Remember that when you use a bridge rectifier you must cut the current
ratting of the
transformer in half from what it is with a full wave rectifier. There
is only so much power that
you can get out of a transformer. When you double the voltage, with a
bridge, that leaves you
with half the current capability to equal the same power.

With two transformers you get the benifit of the total power
capability of both transformers
added together. By the different rectifier connections it gives you
more choices of voltage
outputs. Either way you end up with the total power capacity of the

two transformers.
As long as you don't exceed the current ratting of either
transformer.

73
Gary K4FMX

3291. DDS LO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 16:30:12 UTC
From: Bob Liesenfeld <robert.liesenfeld@neicoltech.org>
Message-ID: <3CD01814.EBD35E47@neicoltech.org>
Source record: 44431

Hi gang,
My son and I are building an SSB exciter that we want to put on 2 meters. I am looking for a DDS VFO to use as an LO for a mixer to get up to 144MHz.

The exciter is still being designed so I don't yet know what range of LO I might need, but lets say for now that I after something that will do approx. 3~50MHz with reasonably low phase noise and 10Hz steps. A unit in kit form would be prefered. Any suggestions?

Thanks
Bob L. WB0POQ

3292. Source for RTL chips?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 16:54:38 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <M5Vz8.1095$bZ2.147540001@news.inreach.com>
Source record: 44434

Thanks for reading my post.

In 1972 I built a Micro-TO keyer from that year's ARRL Radio Amateur's Handbook (it originally appeared in Aug 67 QST). It worked fine for many years, but when I fired it up a few days ago it was dead. Turns out that one of the RTL chips (Fairchild uL914) had failed. With it out of the circuit, the rest of the keyer (pulse generator, flip-flops) works OK.

I have searched the current replacement semiconductor distributors, none of which even list this component or any of its variants (Motorola MC814G or HEP584), let alone have a replacement in stock.

Does anyone know where I might find one of these?

I am considering replacing it with a chip from another logic family, but that involves making up an adapter board. I could even use discrete transistors or a transistor array, since the original chip was pretty simple inside. But I'd prefer using the correct chip if possible.

Thanks and 73,

Roger K6XQ

3293. Re: DIODES?

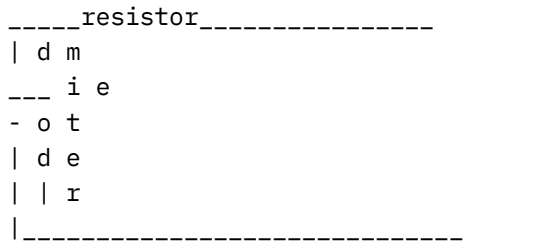
Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 17:07:10 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0205010907.3a1198fd@posting.google.com>
Source record: 44432

"marvin rosen" <raghead@worldnet.att.net> wrote in message
news:<Ekzz8.83$qP1.5712@bgtnsc04-news.ops.worldnet.att.net>...
> What diodes are similar to the 1N34A?
>
>
An important thing to remember is that most of the time when a "1N34" or
"1N34A" is specified, someone is in fact calling for a generic, small
signal germanium diode. The germanium being the key consideration here.

So when you see a "1N34A" specified somewhere, what you want is a small
signal germanium diode. These haven't been commonly used in decades,
silicon diodes taking over the work in most cases. The exception is
when you need the low voltage drop of germanium, like when building
a "crystal radio".

So when you ask for similar diodes, you are really asking the wrong
question. Because if a "1N34A" is hard to come by, finding some other
germanium diode would also be difficult to find. If you find a place
selling germanium diodes, considering the years of specifying a "1N34A"
when germanium is needed, either they will stock the actual 1N34A or
use it to denote a germanium diode.

If you can find old enough equipment, then you may find germanium diodes.
it doesn't really matter about the part number. When this has come up
before, someone mentioned finding germanium diodes in recent "transistor
radios" as the detector diode. I've never checked this, so I can't
confirm. You will be able to differentiate germanium from silicon,
because the former will have a lower reading when using a "diode test"
function on a DVM. If you don't have such a function, set up a test
jig with a 9volt battery, a current limited resistor and some sort
of voltmeter.



The meter will show the voltage drop across the diode.
Silicon diodes will show a higher reading than a germanium.

Michael

3294. Re: Power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 17:25:00 UTC
From: Peter Voelpel <peter.voelpel@t-online.de>
Message-ID: <aap8gv$f6e$00$1@news.t-online.com>
Source record: 44436

Gary Schafer schrieb in Nachricht <3cd014c3.5743145@netnews.attbi.com>...

>Remember that when you use a bridge rectifier you must cut the current
>ratting of the
>transformer in half from what it is with a full wave rectifier. There
>is only so much power that
>you can get out of a transformer. When you double the voltage, with a
>bridge, that leaves you
>with half the current capability to equal the same power.
>
>With two transformers you get the benifit of the total power
>capability of both transformers
>added together. By the different rectifier connections it gives you
>more choices of voltage
>outputs. Either way you end up with the total power capacity of the
>two transformers.
>As long as you don't exceed the current ratting of either
>transformer.

Fine Gary,

I totally agree with your explanation.
But following has to be remarked:
In a centre-tap configuration with fullwave rectification the maximum
permissible current to be drawn is twice as high as the winding is layed out
for.
Current flow is 50% / cycle through each winding half.
For example the transformer has a centre-tapped winding 1000V 0,5A
this transformer has got 500VA, so you may draw 1A at 500V CCS.

With fullwave bridge rectification the current maximum is 500mA at 1KV,
current flow through each cycle is 100%.

73

Peter, DF3KV

3295. Re: 9:1 balun/transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 17:31:20 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aap8p7sfc1@knossos.btinternet.com>
Source record: 44437

For a 9:1 impedance transformer, at 9 MHz, use an HF-grade ferrite ring about 1/2-inch in diameter. Wind on 24 or 27 turns of fine-gauge enamell-insulated wire. Tap the winding at 1/3 (8 or 9 turns) of the total number of turns.

For a lower frequency transformer like 455 kHz use 4 or 5 times the total number of turns.

For a 4:1 impedance ratio tap at 1/2 of the total number of turns. Its so simple you can't believe it.

$$$$$$$$$$$$$$$$$$$$$$$$$
Regards from Reg G4FGQ
Free Radio Modelling Software
Go to http://www.g4fgq.com
$$$$$$$$$$$$$$$$$$$$$$$$$
<brian@robinsonb5.fsnet.co.uk> wrote in message
news:aalq5imfo1@newsg3.svr.pol.co.uk...
> HI,
> I need to match a crystal filter of unknown terminal impedance possibly
> around 450/500ohms. to 50 ohms;Can anyone help, have looked at several
> sources but am confused. Thanks,
>
> Brian G4OZA
>
>

3296. Dayton Motel Room?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 17:32:10 UTC
From: Patrick Croft <mai@iquest.net>
Message-ID: <3CD0269A.E51047FC@iquest.net>
Source record: 44435

Anyone have a spare or canceling Dayton? Looking for a double.

Thanks!

W9GTA

3297. Re: DIODES?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 17:39:52 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <aap998leq1@helle.btinternet.com>
Source record: 44438

"marvin rosen" <raghead@worldnet.att.net> wrote in message
news:Ekzz8.83$qP1.5712@bgtnsc04-news.ops.worldnet.att.net...
> What diodes are similar to the 1N34A?

OA47

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.con
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

3298. Re: Power supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 17:44:04 UTC
From: gaschafer@attbi.com
Message-ID: <3cd02a10.11196357@netnews.attbi.com>
Source record: 44439

On Wed, 1 May 2002 19:25:00 +0200, "Peter Voelpel"
<peter.voelpel@t-online.de> wrote:

>
>Gary Schafer schrieb in Nachricht <3cd014c3.5743145@netnews.attbi.com>...
>
>>Remember that when you use a bridge rectifier you must cut the current
>>ratting of the
>>transformer in half from what it is with a full wave rectifier. There
>>is only so much power that
>>you can get out of a transformer. When you double the voltage, with a
>>bridge, that leaves you
>>with half the current capability to equal the same power.
>>
>>With two transformers you get the benifit of the total power
>>capability of both transformers
>>added together. By the different rectifier connections it gives you
>>more choices of voltage
>>outputs. Either way you end up with the total power capacity of the
>>two transformers.
>>As long as you don't exceed the current ratting of either
>>transformer.
>
>Fine Gary,
>
>I totally agree with your explanation.
>But following has to be remarked:
>In a centre-tap configuration with fullwave rectification the maximum
>permissible current to be drawn is twice as high as the winding is layed out
>for.
>Current flow is 50% / cycle through each winding half.
>For example the transformer has a centre-tapped winding 1000V 0,5A
>this transformer has got 500VA, so you may draw 1A at 500V CCS.
>
>With fullwave bridge rectification the current maximum is 500mA at 1KV,
>current flow through each cycle is 100%.
>
>73
>
>Peter, DF3KV
>
>

Agreed Peter.

You have to be careful of how transformers are ratted. Most
transformers with a center tap the
given current ratings are for a full wave circuit. Using that same
transformer with a bridge you
have to de rate the current to half. Transformers without a center
tap may have their current
ratting with a bridge rectifier. The transformer spec sheet will
usually specify.

73
Gary K4FMX

3299. news in home page

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 18:05:27 UTC
From: Andrea <mezand@libero.it>
Message-ID: <uiVz8.41310$W9.1005140@twister2.libero.it>
Source record: 44433

news in home page

www.qsl.net/iw4cb

3300. Re: Source for RTL chips?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 19:05:52 UTC
From: "Carl R. Stevenson" <wk3c@fast.net>
Message-ID: <3cd03c97_2@news7.fast.net>
Source record: 44440

"Roger Leone" <arleone@inreach.com> wrote in message
news:M5Vz8.1095$bZ2.147540001@news.inreach.com...
> Thanks for reading my post.
>
> In 1972 I built a Micro-TO keyer from that year's ARRL Radio Amateur's
> Handbook (it originally appeared in Aug 67 QST). It worked fine for many
> years, but when I fired it up a few days ago it was dead. Turns out that
> one of the RTL chips (Fairchild uL914) had failed. With it out of the
> circuit, the rest of the keyer (pulse generator, flip-flops) works OK.
>
> I have searched the current replacement semiconductor distributors, none
of
> which even list this component or any of its variants (Motorola MC814G or
> HEP584), let alone have a replacement in stock.
>
> Does anyone know where I might find one of these?
>
> I am considering replacing it with a chip from another logic family, but
> that involves making up an adapter board. I could even use discrete
> transistors or a transistor array, since the original chip was pretty
simple
> inside. But I'd prefer using the correct chip if possible.
>
> Thanks and 73,
>
> Roger K6XQ

Roger,

RTL??? Haven't even heard of that in over 20 years ... been
out of production longer than that ... didn't have a very long
production life, either as I recall, so probably not much around,
even in junk boxes.

Let's see ... you built the keyer in 1972 from a 1967 design ...
that sounds like the RTL parts were probably obsoleted by
early TTL at the time you built it ... sounds to me like you
got your money's worth out of it, though :-)

I know it's heresy, but have you considered just getting one of
the single-chip keyer chips and making life easy on yourself?
(Besides, it'll run from something like a 9V battery for a LONG
time ...) If it makes you feel better, you can probably re-use
the case so it looks like the old familiar unit :-)

73,
Carl - wk3c

3301. Re: First HB receiver, synchronous detection??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 19:38:50 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0205011138.50d0fa48@posting.google.com>
Source record: 44441

"John" <john@clavin.freeserve.co.uk> wrote in message
news:<aanbuc$e8o$1@news5.svr.pol.co.uk>...
> Hi Guys,
>
> I'm about to embark on my first RX project, 5.80 - 14.0 Mhz AM only . The
> basic lineup (for a basic RX) is... pre-selector, Variable RF amp, second
> stage pre-selector, fixed gain RF amp (only if needed) to feed TAK-893
> level 17 passive DBM, (LO with high level drive), IF out to tuned IF amp,
> 455khz (6khz BW) high quality ceramic filter, tuned IF amp, detector,
> switched capacitor audio filter with notch filter and AF pre and pwr amps.
>
> But I'm thinking of detection now. Is it worth my while trying to implement
> a simple-ish synchronous detector? Ive heard that this method is well worth
> the extra effort. Also, Ive read that basically, a tuned limiting amp is
> used to re-create the carrier, but with detection happening at IF, isnt it
> just a matter of mixing a carrier at the IF frequency? i.e in my case mixing
> a carrier of 455khz with a second double balanced mixer to resolve the
> audio?
>
> Apologies if any of the above sounds amateurish, but thats what I am. And as
> such, any and all suggestions would be very welcome. Oh, Ive chosen 455khz
> as the IF, because then my 2 RF preselectors and Local Oscillator can be
> tuned with a 3 stage variable cap without much of a "tracking" error. Any
> image problem resulting from the low IF, should have been minimised by the
> sturdy front-end anyway.
>
> All suggestions welcome....
>
> John.

I assume you are chose a 455KHz IF because you have a filter for
that frequency. Because filter availability aside, I think it would
be easier to have a higher IF. You talk about tracking, but you
can do away with that alignment by having a preselector control separate
from the VFO. If you have a high enough IF, it's easy to peak on
the right image, but with a 455Khz IF, a separate preselector control
would be troublesome. If you can't go with a higher IF, I'd add
my vote for double conversion. There are a number of consumer items
that you could pick up at a garage sale (or church or scholl rummage sale)
that would have a rather wide 10.7MHz ceramic filter, a crystal
to convert to 455KHz, and a 455KHz FM-bandwidth filter for that matter.
Portable phones, 49Mhz superhet walkie talkies, maybe some cellphones,
and CB sets will often offer up these components (there are exceptions,
because you do see portable phones that do a single conversion to 455KHz,

as will some of those walkie talkies and CB sets).

As for a fancy detector, I'd go with the other suggestion, of starting with a simple diode detector to get it going, and then a plug-in detector to try various things.

There is plenty to play with in the form of a "better AM detector" and whether or not they really improve things (in rec.radio.shortwave there is varying opinions on the subject), trying different schemes may be more interesting than building the basic receiver.

There are a bunch of different schemes that would be referred to as "synchronous detectors" some of which probably aren't. The basic scheme is to use a a strong locally generated carrier or regenerated carrier to beat the incoming signal down to audio. The need for the "synchronous" part is so there isn't a beat with the incoming signal, and more importantly, so the inserted carrier is exactly in the middle between the two sidebands.

(Of course, you can avoid the need for matching the reinserted carrier to the incoming signal by using a sideband-bandwidth filter, and using it to convert the incoming AM signal to an SSB signal with suppressed carrier, at which point the product detector converts it to audio just like any other sideband signal.)

One of the earliest schemes is simply to boost the incoming carrier in reference to the incoming sidebands. This is one of the early uses for the Q-mulitplier. It had a nice narrow peak, but lousy skirts. So by setting it right, you'd boost the incoming carrier enough.

Al the rest of the schemes use an outright product detector.

Sometime in the fifties, someone wrote an article in QST for a fancy receiver. It featured two IF strips. One was an AM-bandwidth channel, for normal AM reception. The other was a CW-bandwidth channel, obviously for CW, with a product detector and BFO. But if the usual diode detector wasn't good enough, you could put the product detector at the output of the AM channel, but instead of the BFO feeding the detector's other input, the output of the CW channel would provide a regenerated carrier to beat the incoming AM signal to audio.

More recently, you'd see circuits that were similar. But instead of a narrow filter to extract the incoming carrier, there'd be a limiter to take out the amplitude variations of the incoming signal, and that would beat in a product detector with the incoming signal. Sometimes you don't even need a specific limiter; an early article on the MC1496 double balanced mixer said that you could use the lower transistors as a limiter, so long as the signal was strong enough.

Motorola made an IC, the MC1330P, to do this. Those may be hard to come by, though I've found them in a TV set or two.

The most useful solution for this would now would be some sort of
FM IF strip. Some of them use a FM detector that is a balanced mixer,
and you just don't put in the phase-shifting circuitry that you'd
need for FM.

The ones with limiters have been called "quasi-synchronous". If the
signal gets too weak, they may stop working. And none of the above schemes
work for DSB with no carrier, since they count on an incoming carrier,
however weak, to extract.

The simplest synchronous detector would be a phase-locked loop, and
a product detector.

And then of course, you can get fancy and have selectable sideband
in the synchronous detector, via phasing techniques.

I've glossed over the ones where the incoming signal is doubled,
and then divided by two, to provide your locally generated signal.
This works without any incoming carrier, because it's working
on the two sidebands.

Michael VE2BVW

3302. Re: DIODES?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 20:31:48 UTC
From: la8ak.xnd@online.no
Message-ID: <3cd0361f.67739266@news.online.no>
Source record: 44442

On 1 May 2002 10:07:10 -0700, blackm00@cam.org (Michael Black) wrote:

>If you can find old enough equipment,
found a lot of discarded equipment using 1N34A during the last 10
years, and since Imight need such diodes I kept the units. It might be
easier to search for certain equipment which is likely to use such
diodes than finding it in later equipment made after 1970

> then you may find germanium diodes.
>it doesn't really matter about the part number.

This is very true! But it is true for most parts we use, like
transistors, you need only a smaller amount of types, but still it is
lot of cries for different types we really don't need for success with
our constructions

73
LA8AK

--
remove ,xnd to reply

3303. Re: DIODES?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 22:13:50 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <yMZz8.254$vT1.17756@bgtnsc04-news.ops.worldnet.att.net>
Source record: 44445

Thanks to all for your help! I will be collecting all types of "germanium"
diodes for my xtal radio experiments.
"marvin rosen" <raghead@worldnet.att.net> wrote in message
news:Ekzz8.83$qP1.5712@bgtnsc04-news.ops.worldnet.att.net...
> What diodes are similar to the 1N34A?
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.350 / Virus Database: 196 - Release Date: 4/17/02
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.351 / Virus Database: 197 - Release Date: 4/19/02

3304. Re: DIODES?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 22:39:07 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CD06E8B.C8307427@netscape.net>
Source record: 44446

marvin rosen wrote:
>
> Thanks to all for your help! I will be collecting all types of "germanium"
> diodes for my xtal radio experiments.

Ocean State Electronics has 1N34As for 35 cents, 1N60 for 30 cents and
1N270 for 60 cents.
http://www.oselectronics.com/ose_p42.htm

-Bill

3305. Re: First HB receiver, synchronous detection??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 23:01:19 UTC
From: John <john@clavin.freeserve.co.uk>
Message-ID: <aapsnv$2h7$1@newsg1.svr.pol.co.uk>
Source record: 44347

Hi Guys,

Thanks for the replies folks! It seems unanimous, one IF at 455khz will give me image problems. (Im 35, my hair is turning grey and falling out, ...I have all the image problems i need!) So it looks like its back to the drawing board. ..a higher IF, a seperate pre-selector?, and a simple diode for detection, until im up and running!

Cheers guys!

John, G0WPA

"John" <john@clavin.freeserve.co.uk> wrote in message
news:aanbuc$e8o$1@news5.svr.pol.co.uk...
> Hi Guys,
>
> I'm about to embark on my first RX project, 5.80 - 14.0 Mhz AM only . The
> basic lineup (for a basic RX) is... pre-selector, Variable RF amp, second
> stage pre-selector, fixed gain RF amp (only if needed) to feed TAK-893
> level 17 passive DBM, (LO with high level drive), IF out to tuned IF amp,
> 455khz (6khz BW) high quality ceramic filter, tuned IF amp, detector,
> switched capacitor audio filter with notch filter and AF pre and pwr amps.
>
> But I'm thinking of detection now. Is it worth my while trying to
implement
> a simple-ish synchronous detector? Ive heard that this method is well
worth
> the extra effort. Also, Ive read that basically, a tuned limiting amp is
> used to re-create the carrier, but with detection happening at IF, isnt it
> just a matter of mixing a carrier at the IF frequency? i.e in my case
mixing
> a carrier of 455khz with a second double balanced mixer to resolve the
> audio?
>
> Apologies if any of the above sounds amateurish, but thats what I am. And
as
> such, any and all suggestions would be very welcome. Oh, Ive chosen 455khz
> as the IF, because then my 2 RF preselectors and Local Oscillator can be
> tuned with a 3 stage variable cap without much of a "tracking" error. Any
> image problem resulting from the low IF, should have been minimised by the
> sturdy front-end anyway.
>
> All suggestions welcome....
>
> John.

>
>

3306. Re: Source for RTL chips?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 23:20:49 UTC
From: la8ak.xnd@online.no
Message-ID: <3cd06b2f.81324864@news.online.no>
Source record: 44348

On Wed, 1 May 2002, "Carl R. Stevenson" <wk3c@fast.net> wrote:

>
>> In 1972 I built a Micro-TO keyer from that year's ARRL Radio Amateur's
>> Handbook (it originally appeared in Aug 67 QST). It worked fine for many
>> years, but when I fired it up a few days ago it was dead. Turns out that
>> one of the RTL chips (Fairchild uL914) had failed. With it out of the
>> circuit, the rest of the keyer (pulse generator, flip-flops) works OK.
>
>RTL??? Haven't even heard of that in over 20 years ... been
>out of production longer than that ... didn't have a very long
>production life, either as I recall, so probably not much around,
>even in junk boxes.
>
�L914, according to my 1969 Motorola Semiconductor Data Book is a
dual 2-input NAND/NOR-gates. A good replacement is usually made from a
BC238 or similar NPN-transistor with few resistors and/or diodes per
gate. I have some experience simplifying the amount of gates -
particularly with CMOS which I have used since 1974.

The list says "NAND/NOR-gates", but the symbol on next page shows
NOR-gates

73,
LA8AK
--
remove ,xnd to reply

3307. Re: DDS LO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-01 23:31:34 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3cd078ff$0$28229@echo-01.iinet.net.au>
Source record: 44349

Bob
John Miles and I have been working on a board that could fit your
requirements
You can see phase noise plots at http://www.qsl.net/ke5fx/synth.html
of an earlier version running at 1 GHz. This uses a filtered DDS covering a
narrow range for fine resolution as the reference for a PLL and VCO at
signal frequency
The board should accomodate VCO modules (Minicircuits ROS series) to cover
50 MHz to 2.5 GHz or so and the National PLL chips to cover a similar range.
Parts are virtually all surface mount
It is a matter of changing software, loop filter and regulator voltages to
fit your choice of components. It is not available in a kit but parts are
available from a limited number of suppliers.
I am ordering the second proto board run *today*

Richard

"Bob Liesenfeld" <robert.liesenfeld@neicoltech.org> wrote in message
news:3CD01814.EBD35E47@neicoltech.org...
> Hi gang,
> My son and I are building an SSB exciter that we want to put on 2
> meters. I am looking for a DDS VFO to use as an LO for a mixer to get
> up to 144MHz.
>
> The exciter is still being designed so I don't yet know what range of
> LO I might need, but lets say for now that I after something that will
> do approx. 3~50MHz with reasonably low phase noise and 10Hz steps. A
> unit in kit form would be prefered. Any suggestions?
>
> Thanks
> Bob L. WB0POQ
>

3308. Re: DIODES?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-02 00:01:24 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <kkvpaa.6j.ln@my.linux.box>
Source record: 44350

In article <Ekzz8.83$qP1.5712@bgtnsc04-news.ops.worldnet.att.net>, marvin rosen wrote:
> What diodes are similar to the 1N34A?

OA91

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.18

3309. Re: Germanium Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-02 01:23:10 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <2y0A8.23347$D%5.3418@sccrnsc01>
Source record: 44351

Last time I looked at Radio Shack, they were still the stocking the old
reliable
Germanium signal diode 1N34 (that is where I bought my last ones).

Greg
w9gb

"Mark Hall" <vze2mhvc@bellatlantic.net> wrote in message
news:3CCF0055.3DE46755@bellatlantic.net...
> Not too many.. those are germanium signal diodes with a Vforward of
> about 0.3V.. I believe the 1N90 is also germanium. You might consider
> schottky diodes which have a Vf of around 0.4 volts, but probably won't
> work very well as an AM detector. Standard silicon diodes (such as
> !N4148)have a Vf of 0.6 volts or more. Any Germanium signal diode
> should have similar characteristics to the 1N34. Not too many around
> these days, but you might get lucky.
>
> '73 KI4Z
>

3310. Re: Epiphyte tranceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-02 01:49:40 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <UW0A8.206080$CH1.141049@sccrnsc02>
Source record: 44352

Mike -

Chuck Adams maintains a Newsletter Index for the Norcal QRPp Newsletter at:
http://www.qsl.net/k7qo/qrpp.html

QRPp Volume II Issue 3 September 1994

I know that the PC boards are available from FAR circuits (here in the
Chicago area)
http://www.farcircuits.net/tcvrs1.htm

According to Fred's (FAR Circuits) web site:
Look for magazines:

QRPp November and Decmber 1994
or
QRPp March 1996 - Epiphyte 2 (Author was VE7QK)

QRPp June 1996 - Digital Display for Epiphyte 2

Derry Spittle VE7QK designer of the world famous Epiphyte series of SSB 80
mtr rigs unveiled the prototype of his latest of the series the long awaited
Epiphyte 3, this will be officially offered as a kit by the NorCal club
within the next few months. (March 3, 1999 Norwest QRP Club meeting - know
known as the The nwq-l Email List) ...At this same meeting the Elecraft K2
was unveiled !

Date: Wed, 24 Apr 2002 17:45:28 +0900
From: Junichi Nakajima
To: qrp-l@Lehigh.EDU
Subject: [125432] Re: epiphyte
Message-ID: <200204240839.RAA06635@ryuu.>
Mime-Version: 1.0
Content-Type: text/plain; charset=us-ascii

As my understanding, the kit is already discontinue (Epiphyte 2).
The simple SSB transceiver ever seen is a valuable one.
Still the Far Circuit is handling the epiphyte board of previous version.
But I suppose a few parts used in the Epyphite are few to find in market.
Especially MURATA 455Khz SSB ceramic filter is difficult to obatain
even in Japan.

I hope you will find un-assembled kit in the QRP-L FS, or the next
transceiver which will be released from SWL is your another
choise to get nice 80m SSB transceiver.

JL1KRA/QRP Junichi

Photo of Derry at Pacificon 2000 Pictures
http://www.qsl.net/kb6cgg/pacificon2000/pics/pac29.htm

w9gb

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
news:3ccdd8e9.1894808@news.freeserve.net...
> Does anyone know of a URL for the circuit of the Epiphyte ?.
> or perhaps a scan of the original article from QRPp.
> thanks Mike W, G8NXD/ M3MSM qthr

3311. Re: Source for RTL chips?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-02 04:07:12 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0205012007.2a5b3556@posting.google.com>
Source record: 44353

"Roger Leone" <arleone@inreach.com> wrote in message
news:<M5Vz8.1095$bZ2.147540001@news.inreach.com>...
> Thanks for reading my post.
>
> In 1972 I built a Micro-TO keyer from that year's ARRL Radio Amateur's
> Handbook (it originally appeared in Aug 67 QST). It worked fine for many
> years, but when I fired it up a few days ago it was dead. Turns out that
> one of the RTL chips (Fairchild uL914) had failed. With it out of the
> circuit, the rest of the keyer (pulse generator, flip-flops) works OK.
>
> I have searched the current replacement semiconductor distributors, none of
> which even list this component or any of its variants (Motorola MC814G or
> HEP584), let alone have a replacement in stock.
>
> Does anyone know where I might find one of these?
>
> I am considering replacing it with a chip from another logic family, but
> that involves making up an adapter board. I could even use discrete
> transistors or a transistor array, since the original chip was pretty simple
> inside. But I'd prefer using the correct chip if possible.
>
> Thanks and 73,
>
> Roger K6XQ

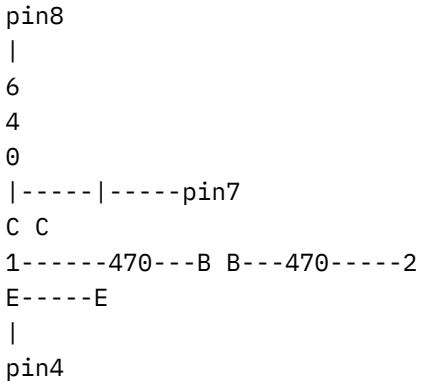
One time when this came up before, Don Lancaster swooped in to mention
some companies that deal in obsolete semiconductors. I think he caught
the post because I mentioned his "RTL Cookbook".

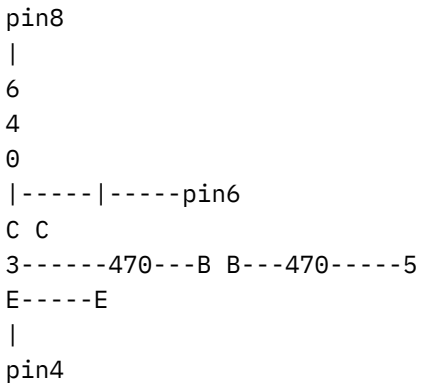
There really isn't much to RTL, and luckily you need a gate, not a
flip-flop. Thirty years ago, you could find articles that would tell
you that you could just as easily build up the gates with discrete
components. I can picture someone saying to use 2N706s. The RTL
Cookbook does show resistor values, but at a glance I don't see
the reference to 2N706.

In this particular case, you only need 3 npn silicon transistors,
3 470 ohm resistors, and 2 640ohm resistors. The flip-flops were
worth doing by IC, but that 914 could have just easily been done
with discrete components.

I think building up the circuit is legitimate, assuming you want
to keep the circuit "authentic". If I looked enough, I could find
the article or two where the author built up their own RTL equivalents
with discrete components.

I suspect if you start trying to replace any of the ICs with other logic families, you'll have to replace all of the ICs. Not costly, but once you move away from RTL, the circuit, particularly that diode from the paddle to the 914, may need reworking.





I hope that makes sense.

Michael VE2BVW

3312. Re: Source for RTL chips?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-02 04:48:30 UTC
From: "r.crowley" <rcrowley7@xprt.net>
Message-ID: <ud1h92lsgduc9c@corp.supernews.com>
Source record: 44354

"J M Noeding" wrote
> The list says "NAND/NOR-gates", but the symbol on next page shows
> NOR-gates

IIRC, they are NAND with one polarity of logic, and NOR with the other polarity!

3313. Re: Source for RTL chips?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-02 05:02:21 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <%L3A8.1139$bs4.153676895@news.inreach.com>
Source record: 44355

Thank to all who replied, here or direct...

Several sources of these old chips have been suggested and this has stopped my plans to substitute another logic family or create gates from discrete components.

I was sort of looking forward to some experimenting, but it is no longer necessary.

Regards,

Roger

3314. Re: First HB receiver, synchronous detection??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-02 05:41:16 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <jmg1duguh6fck1pdo5p696bil40imlalvg@4ax.com>
Source record: 44356

On 1 May 2002 12:38:50 -0700, blackm00@cam.org (Michael Black) wrote:

>I assume you are chose a 455KHz IF because you have a filter for
>that frequency. Because filter availability aside, I think it would
>be easier to have a higher IF.

A conventional envelope detector (using a single diode) definitely needs an IF amplifier with a bandwidth comparable to the transmitted bandwidth. If a large spectrum enters into an envelope detector, there will be all kind of beat frequencies between unwanted carriers and unwanted sidebands falling into the audio passband.

However, if a true synchronous product detector is used, the only beats occur between the locally regenerated carrier and the incoming spectrum. The beats between the local carrier and unwanted carriers and their unwanted sidebands will fall on high audio frequencies, which can then be removed by an audio filter after the detector. Thus, quite wide IF filters could be used, so a single conversion with 10.7 MHz IF might be possible. Other convenient IF frequencies, with lot of filters available, would be the TV-audio subcarriers at 4.5, 5.5, 6.0 or 6.5 MHz depending on the region. The width of the IF filters control the total amount of power entering the product detector, thus, controlling the available dynamic range.

The old (1974) Signetics data book had an application note about using the 561 PLL (which also contained an additional product detector for AM demodulation) as a medium wave (550-1600 kHz) receiver without a single LC circuit. Apparently the dynamic range would be very poor with the whole spectrum entering the product detector. However, with a good preselector a direct conversion synchronous AM detection would be quite possible. Unfortunately it has always been hard to find these obsolete chips.

Paul OH3LWR

3315. Re: First HB receiver, synchronous detection??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-02 06:24:17 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0205012224.67f35f3a@posting.google.com>
Source record: 44357

Hi John,
many years ago I played with AM synchronous detectors, namely with one based on TAA661 (absolutely obsolete now ;-) The carrier was regenerated by limitation of the AM signal and then mixed with the original signal - both at IF 455 kHz. When I replaced a common one-diode detector with this circuit, many weak signals appeared on the band. I saw no effect on strong signals. So, both in theory and in practice, the product detector drastically improves the reception of weak AM signals.

BR from Ivan

3316. Re: WANTED: schematic for HF noise canceller (like the MFJ-1026)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-02 06:36:39 UTC
From: Chuck Hutton <chutton1@qwest.net>
Message-ID: <i85A8.119$8r5.137384@news.uswest.net>
Source record: 44358
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

It's not really a "noise canceller" as it is what MW and SW DX'ers call a simple phasing box. It's job is to create two signals 180 degrees out of phase and sum them to produce a null. In other words, it cancels whatever arriving signal is made to be 180 degrees out of phase in the two antenna inputs. In the case of the MFJ, one input is supposed to be a short whip or similar whose job it is to pick up the local noise source while the other input is the main antenna. I don't know how they do the phase adjustment works (could be L-C, could be delay lines, could be a one of several other ways) but the fundamental idea is the same.

It is not considered a robust front end in the MW DX'ing community. Mixing products have been noted by a lot of people. If you want to roll your own, I'd look at other designs. Go to http://www.qsl.net/wa1ion/ and you'll find his web pages of presdelectors and phasing units. One of them will surely do the job for you.

Chuck

Jason Hsu <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0204291232.20f95fb6@posting.google.com...
> Where can I find a schematic for a noise canceller for HF? I would
> like to homebrew a noise canceller/preamplifier that would be similar
> to the MFJ-1026. (Unfortunately, the MFJ manuals available online
> don't include the schematic.)
>
> I would particularly appreciate an explanation on how the various
> parts of the circuit work (noise amplifier, noise phase shifter,
> signal preamplifier, filters, etc.) and the transformer specifications
> I need (so that I can use something available to me).
>
> Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com
> http://www.jasonhsu.com/ham_radio-technical.html
>

3317. Re: Source for RTL chips?

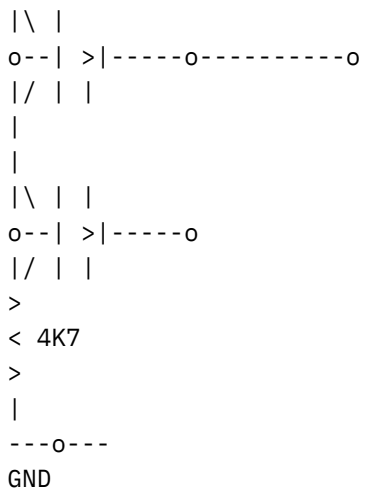
Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-02 09:46:41 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <aar1u1$crkat$1@ID-61331.news.dfncis.de>
Source record: 44359

Michael,

> In this particular case, you only need 3 npn silicon transistors,
> 3 470 ohm resistors, and 2 640ohm resistors. The flip-flops were
> worth doing by IC, but that 914 could have just easily been done
> with discrete components.
>

In most cases I find you need even less. Many of my projects used discrete components for the gates, particularly in the early days when funds were severely limited and I had to make do with whatever parts I could find.

Here's the OR gate, just two diodes and a resistor:



Reverse the diodes and connect the resistor to VCC for an AND gate. Of course, there is no buffering so you can't cascade these types of gates, but most often they are fine for driving TTL inputs, e.g. say you have a 74LS393 dual 4-bit binary counter and you are making a clock, you want to decode the 10 count and cause a reset, to get proper counting from 0-9. Using this kind of AND gate (on the Q0 and Q2 outputs) to feed the reset input works just fine. Adding a single transistor stage buffers the output if you need it, and creates a NOR (or NAND) gate.

I did this many times, it works well and is often worthwhile even if you do have the needed TTL chip. E.g., if you only want one AND gate, you don't need to use a whole 74LS08.

Hans Summers
http://www.HansSummers.Com

3318. Re: DDS LO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-02 10:30:27 UTC
From: poissondanlo@aol.com
Message-ID: <20020502063027.01636.00003984@mb-cl.aol.com>
Source record: 44360

hello ,
from Serge /F5JTM

may be here :
french work 144 MHz
http://perso.wanadoo.fr/f5cau/page_xver.htm

3319. Re: WANTED: schematic for HF noise canceller (like the MFJ-1026)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-02 11:25:08 UTC
From: jrobmills@aol.comrx320
Message-ID: <20020502072508.07783.00006905@mb-mp.aol.com>
Source record: 44361

>WANTED: schematic for HF noise canceller (like the MFJ-1026)<

The late Doug Demaw had a construction article (think it was in 2 issues) of
Monitoring Times on exactly that. He also had that article (slightly different)
in one of the ham publications but I'm not sure which.
I saved the MT articles but can't lay a hand on them right now as I am still
packed in boxes (many, many boxes) from a recent move.
If still interested in a month or so, check back with me.

Rob Mills ~~~

3320. Two-tone oscilator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-02 17:19:06 UTC
From: "Joel (AG4QC)" <joel@cyberbest.com>
Message-ID: <AyeA8.202$sF2.189705342@twister1.starband.net>
Source record: 44362

I want to build a two-tone oscillator for testing linear amps. I was thinking about using 555's for the two frequencies. But they seem to be poor sign waves generators and so would need to either build a low pass filter or make discrete oscillators. Does anyone have any experience in building one of these little animals. Any resources for drawings? What about frequencies?.. I would suspect they shouldn't be harmonically related?

Joe (AG4QC)

3321. Re: Two-tone oscilator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-02 19:05:32 UTC
From: Bob Liesenfeld <robert.liesenfeld@neicoltech.org>
Message-ID: <3CD18DFC.F12263A9@neicoltech.org>
Source record: 44363

"Joel (AG4QC)" wrote:

> I want to build a two-tone oscillator for testing linear amps. I was
> thinking about using 555's for the two frequencies. But they seem to be poor
> sign waves generators and so would need to either build a low pass filter or
> make discrete oscillators.

For a clean AF sinewave oscillator, I like the "twin T" (aka phase shift). It can be built with a single 2N2222, and makes a very nice waveform. You would need 2 circuits connected through a couple of resistors to combine the outputs. You should be able to find a skez in any ARRL Handbook.

72
Bob WB0POQ

3322. Re: wireless serial link (possibly off-topic)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-02 19:59:49 UTC
From: Phillip Jockell <pjockXXX@verizon.net>
Message-ID: <Xns9202A2C443E9pjockverizonnet@199.45.49.11>
Source record: 44364

Radio Shack sells some relatively inexpensive data link modules
through the web. They are about $10 US for each receiver or
transmitter. I believe they operate in that 300 MHz band where
remote controls, etc operate.

If you want specifics and can't find them at www.radioshack.com,
email me directly (remove x's from reply address...)

Phil - N4GWV

"Torfi" <torfitorf@yahoo.com> wrote in
news:3ccd040b$0$14913$9b622d9e@news.freenet.de:

> Hello!
>
> I m currently tinkering with the idea of a digital remote monitor and
> looking for input.
> Here s what I want to do:

3323. Re: Epiphyte tranceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-02 21:01:52 UTC
From: dphil <dphil@breathemail.net>
Message-ID: <3cd1a913_1@news1.vip.uk.com>
Source record: 44365

Mike W wrote in message <3ccdd8e9.1894808@news.freeserve.net>...
>Does anyone know of a URL for the circuit of the Epiphyte ?.
>or perhaps a scan of the original article from QRPp.
>thanks Mike W, G8NXD/ M3MSM qthr

Goto GQRP site,
then goto Sprat
then goto Sprat Errors
See Issue 107
Pdf Diagram a & Diagram b

Phil G8AAE

3324. Re: Two-tone oscilator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-03 00:35:41 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3cd1d983$0$30793@echo-01.iinet.net.au>
Source record: 44366

Joel
Do you want to test RF amplifiers?
If so I presume you would apply two tone audio to your SSB generator in this case. The problem with this is that any incompletely suppressed carrier and opposite sideband may interfere with the test and not reflect the true IMD performance of the amplifier. An alternative approach would be to use two RF oscillators and combine them in a hybrid befoire applying them to the amplifier.

Richard

"Joel (AG4QC)" <joel@cyberbest.com> wrote in message
news:AyeA8.202$sF2.189705342@twister1.starband.net...
> I want to build a two-tone oscillator for testing linear amps. I was
> thinking about using 555's for the two frequencies. But they seem to be
poor
> sign waves generators and so would need to either build a low pass filter
or
> make discrete oscillators. Does anyone have any experience in building one
> of these little animals. Any resources for drawings? What about
> frequencies?.. I would suspect they shouldn't be harmonically related?
>
> Joe (AG4QC)
>
>

3325. Re: Two-tone oscilator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-03 01:24:02 UTC
From: w4pqwhs@aol.com
Message-ID: <20020502212402.27941.00005164@mb-fb.aol.com>
Source record: 44367

Check Amateur radio handbooks they have shown all this stuff through the years. most libraries have the handbooks

3326. Re: Two-tone oscillator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-03 01:53:20 UTC
From: "Joel (AG4QC)" <joel@cyberbest.com>
Message-ID: <C4mA8.13113$_q1.692708559@twister2.starband.net>
Source record: 44368

Yuh know.. I have about 10 different years of handbooks, and have yet to see such a simple test device. There is an interesting oscillator in the Bill Orr book that I'm considering. Maybe I just can't find it in my ARRL Handbooks, but I can't.. Maybe give me the section or page and year? The handbooks obviously cover oscillators and someone mentions a twin 'T' type and is probably what I will end up with. But yeah, I would have thought they would have had a small two-tone project <shrug>

Joe AG4QC
"W4pqw HS" <w4pqwhs@aol.com> wrote in message
news:20020502212402.27941.00005164@mb-fb.aol.com...
> Check Amateur radio handbooks they have shown all this stuff through the
> years. most libraries have the handbooks

3327. Re: Two-tone oscilator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-03 02:02:16 UTC
From: "Joel (AG4QC)" <joel@cyberbest.com>
Message-ID: <1dmA8.13114$oA1.693318835@twister2.starband.net>
Source record: 44369

I am planning on using this on the normal microphone connector of the SSB exciter and have that drive the amp. Once I'm sure the exciter looks good, then I can concentrate on the linear. I'm mostly looking for flat topping and abnormal waveforms or not..

Joel AG4QC
"Richard Hosking" <zaprichardh@iinet.net.au(remove the zap)> wrote in message news:3cd1d983$0$30793@echo-01.iinet.net.au...
> Joel
> Do you want to test RF amplifiers?
> If so I presume you would apply two tone audio to your SSB generator in this
> case. The problem with this is that any incompletely suppressed carrier and
> opposite sideband may interfere with the test and not reflect the true IMD
> performance of the amplifier. An alternative approach would be to use two RF
> oscillators and combine them in a hybrid befoire applying them to the
> amplifier.
>
> Richard
>
> "Joel (AG4QC)" <joel@cyberbest.com> wrote in message
> news:AyeA8.202$sF2.189705342@twister1.starband.net...
> > I want to build a two-tone oscillator for testing linear amps. I was
> > thinking about using 555's for the two frequencies. But they seem to be
> poor
> > sign waves generators and so would need to either build a low pass filter
> or
> > make discrete oscillators. Does anyone have any experience in building one
> > of these little animals. Any resources for drawings? What about
> > frequencies?.. I would suspect they shouldn't be harmonically related?
> >
> > Joe (AG4QC)
> >
> >
>
>

3328. Shortwave, Signal Generators, Etc.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-03 02:26:58 UTC
From: jdp1209@adelphia.net
Message-ID: <fqh6du8ak6jqskde4mla5783nhjupciuj7@4ax.com>
Source record: 44370

In a package deal, I acquired the following equipment that I have no need for. If anyone can tell me what they are worth, I can email pictures If anybody is interested in them, make me an offer.

1. Wells Gardner Co. US Army Signal Corp Receiver BC 348 N. Receives 200-500 KC and 1.5 -18 MHz.

2. General Electric YGS 3 Signal Generator

3. Square Wave Signal Generator Model 71

4. Five (5) Frequency Counters up to 600 MHz. Missing the 10 mhz crystal. Looks like the one in 1992 ARRL HAndbook.

Thanks.

3329. Re: 6 Meter Project for Sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-03 03:31:08 UTC
From: Dan Reynolds <bcdlr@insightbb.com>
Message-ID: <0wnA8.44509$vX.4001@rwcrnsc53>
Source record: 44371
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

Somebody make me an offer. This is a good homebrew project. I'm just not a good homebrewer and trying to thin out the projects a little. All reasonable offers considered.

Dan Reynolds KB9JLO

> 6 meter AM transceiver put out by the Iowa QRP club. I have the board, the
> pots, a used CB modulation transformer, the modulator chip, the crystal
> filter (the good one), and the coil form. I'm thinking $35 plus shipping
or
> make me an offer, or trade for a good SSB audio filter... I can do
PayPal.
>
> Dan Reynolds KB9JLO
>
>
>

3330. Re: Two-tone oscillator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-03 03:38:26 UTC
From: k9wkj <k9wkj@hotmail.com>
Message-ID: <pBnA8.1067$eV4.42192@reggie.win.bright.net>
Source record: 44372

take a look on the web there are several windows programs out there
i use them for all kinds of things

cul de k9wkj
Joel (AG4QC) <joel@cyberbest.com> wrote in message
news:C4mA8.13113$_q1.692708559@twister2.starband.net...
> Yuh know.. I have about 10 different years of handbooks, and have yet to
see
> such a simple test device. There is an interesting oscillator in the Bill
> Orr book that I'm considering. Maybe I just can't find it in my ARRL
> Handbooks, but I can't.. Maybe give me the section or page and year? The
> handbooks obviously cover oscillators and someone mentions a twin 'T' type
> and is probably what I will end up with. But yeah, I would have thought
they
> would have had a small two-tone project <shrug>
>
> Joe AG4QC
> "W4pqw HS" <w4pqwhs@aol.com> wrote in message
> news:20020502212402.27941.00005164@mb-fb.aol.com...
> > Check Amateur radio handbooks they have shown all this stuff through
the
> > years. most libraries have the handbooks
>
>

3331. RS HTX-242 Repair Issues

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-03 04:14:21 UTC
From: KC8PMX <kc8pmx@NOSPAMdiamondcs.net>
Message-ID: <aattec3238f@enews1.newsguy.com>
Source record: 44376
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I have a Radio Shack HTX-242 mobile radio that the backlighting for the display has failed. Does anyone have experience with this? Is the lighting the "grain of wheat" type of bulbs or ?? Does anyone know what ratings these bulbs are if they are "grain of wheat" types? Any particular problems or other headaches with the replacment of these?

I barely trust my "fat fingers" in such a small area, especially with a soldering iron so I want to take any and every precaution. Any suggestions would be great!

Thanks in advance,

--
Ryan, KC8PMX
FF/MFR

www.qsl.net/w8kea (click on banner at bottom of screen to vote for the site please)

REMOVE "NOSPAM" in email address to reply.

3332. Re: Two-tone oscilator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-03 11:03:13 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <ud4rjq77bfj43e@corp.supernews.com>
Source record: 44373

A two-tone test oscillator is the easiest means to conduct the tests.
I have one I built from an old Radio Handbook (not ARRL) that uses an
LM324. You need a low distortion oscillator and a 555 is not it. Try
a search on the Internet. You may even find a kit available.

3333. Re: Two-tone oscilator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-03 11:11:48 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <ud4s3pti4f1pa0@corp.supernews.com>
Source record: 44374

Here's a link to a page I found searching on "two tone generator"
http://www2.jan.ne.jp/~vyv00160/homebrew/2tone_cir.gif

3334. Re: Two-tone oscilator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-03 11:18:13 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <ud4sfqlbpl2981@corp.supernews.com>
Source record: 44375

Using the ARRL site QST index search on "two tone generator" I find 12
articles regarding building and using these devices.

3335. New search options at radio-portal

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-03 12:36:02 UTC
From: Willi Passmann <DJ6JZ@compuserve.de>
Message-ID: <aau0bd$7ma$00$1@news.t-online.com>
Source record: 44377

The search engine radio-portal
http://www.radio-portal.org
was restructured completely. Now the following search options are at
your disposal on the start page:

Detail Search:
Here you may enter several search terms, which can be combined by the
operators
exact / and / or.
These functions offer the opportunity to adopt the selectivity of a
search. This is a great improvement compared to the previously used
routine. Now your search phrase does not have to fit exactly the
text in the database to get a usable result.
Additionally, a search can be restricted to one of the 63 categories.

Category Search:
These option corresponds to the former "Search in broad". Here you can
combine two of the given categories by the operators
and / or / not.
For example 'Reviews' and 'Antennas', to get an impression on choosing
one's own equipment.
This search routine is extremely useful to get an overview on a field of
interest - a search phrase is not necessary.

Advanced Search:
On a separate page all functions mentioned above can be combined at the
same time. So it is possible to restrict the number of results to a
senseful value or to find entries belonging to various search phrases or
categories.

I am currently working to enable a search within results pages as a
further option.

You will find further explanations and operating examples via the "FAQ"
Button.

The Classified Advert pages have been updated also. Here you can offer
or search for hobby related items.

I hope you will like the new options. They are meant as a help to find a
quicker way to radio related information. Meanwhile more than 34.000
pages are in the database - all of them were checked manually. Probably
one of the reasons, radio-portal got the Millenium Innovation Award by
Radio Netherlands Media Network in the year 2000.

Your comments will be appreciated.

Regards, have a good weekend.
Willi Passmann, DJ6JZ

3336. FA: Vacuum Tube Textbooks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-03 13:50:47 UTC
From: zoxx@my-deja.com
Message-ID: <aau4jn$5m8$1@news.netmar.com>
Source record: 44379

For Auction - Three hard-to-find classic textbooks on vacuum tube
circuit design:

-Theory Of Thermionic Vacuum Tubes, E.L. Chaffee, 1933
-Electron Tube Circuits, S. Seely, 1950
-Fundamentals Of Vacuum Tube Technology, A.V. Eastman, 1941

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1727595321

This comprehensive reference library is a must-have.
Reaonable minimum bid with no reserve. Aution ends May 5th.

>>I also have several lots of NOS tubes for auction; (4)6JE6C, (2) 6KD6,
and (22) 837/VT-101.

..My sincere apologies if this posting is inappropriate for this group.
Thanks for looking...

----- Posted via NewsOne.Net: Free (anonymous) Usenet News via the Web -----
http://newsone.net/ -- Free reading and anonymous posting to 60,000+ groups
NewsOne.Net prohibits users from posting spam. If this or other posts
made through NewsOne.Net violate posting guidelines, email abuse@newsone.net

3337. QRP SSB 80/20

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-03 13:52:43 UTC
From: Itsme <antwoord_mij@hotmail.com>
Message-ID: <3cd2962b$0$8168$ba620e4c@news.skynet.be>
Source record: 44378

Hello,

I'm planning to build a small QRP SSB TRX for 80 and/or 20.
Where can I find exemples? I've grownup with valves so don't know much about calculating transistor setups.

All info is wellcome - thanks in advance de Jos (ON7JQ)

3338. Re: Two-tone oscilator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-03 15:21:22 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <P8yA8.10303$rO2.2136522@news6-win.server.ntlworld.com>
Source record: 44380

> A two-tone test oscillator is the easiest means to conduct the tests.
> I have one I built from an old Radio Handbook (not ARRL) that uses an
> LM324. You need a low distortion oscillator and a 555 is not it. Try
> a search on the Internet. You may even find a kit available.
==========
In ARRL Handbook 1986 ,page 25.27 you can find a 2 tone generator (700 -
1900 Hz) with 3 double J-FET Opamps , LF-353N running on two 6v batteries
.
Complete with Hi&Lo Z output and 0,-10,-20,-30,-40,-50 dB attenuator .

In ARRL Handbook 1995 , page 26.38 you can find a hybrid combiner for signal
generators (for 2 ranges : 1-50 MHz and 50 - 500 MHz) for 2 tone testing by
applying RF ,as per Richard Hosking' suggestion.
To test a (linear) power amplifier one would need to add an intermediate
amplifier.

Frank gm0csz.kn6wh@ntlworld.com

3339. FA: Test Equipment

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-03 17:33:21 UTC
From: SAM <xxscottm@xxnetcommander.comxx>
Message-ID: <BRzA8.48777$N8.3476527@bin5.nnrp.aus1.giganews.com>
Source record: 44381

I have some test equipment up for auction. Great for radio repair or ham enthusiasts. You can check them out at the following links.

Pair of Heathkit VTVMs

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1727045750&r=0&t=0&showTutorial=0&ed=1020655650&indexURL=0&rd=1

Eico 377 Audio Generator

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1727049945&r=0&t=0&showTutorial=0&ed=1020656336&indexURL=0&rd=1

Thanks for looking.

3340. Question about large variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-03 18:04:02 UTC
From: Mercurus <azoth@37.com>
Message-ID: <miAA8.28057$_j4.765738@news1.east.cox.net>
Source record: 44382

Hey, I got this very large variable cap out of a ham transmitter, I've never actually seen one this big in person, it was out of a 10 meter ham transmitter, The engraving says Barker and Williamson
Type CX 49 A
Does anyone have the tech specs on this or how much it would be worth?
Thanks
Azoth

3341. Re: Two-tone oscillator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-03 18:05:34 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <ehjuaa.6s2.ln@my.linux.box>
Source record: 44383

In article <C4mA8.13113$_q1.692708559@twister2.starband.net>, Joel (AG4QC) wrote:
> Yuh know.. I have about 10 different years of handbooks, and have yet to see
> such a simple test device.

Murphys law at work. I bet you have the 1992 and the
1994 Handbook. There is a circuit for a two-tone
oscillator on page 25-22 of the 1993 ARRL Handbook.

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.18

3342. Re: Two-tone oscilator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-03 18:14:06 UTC
From: "Joel (AG4QC)" <joel@cyberbest.com>
Message-ID: <8sAA8.13240$3r3.798859370@twister2.starband.net>
Source record: 44384

Frank,
Yup, you're right. They removed it in the newer handbooks that I have (2001-2002) But it's in the 86 to at least the 91 version. I didn't look in the older handbooks, figuring they wouldn't drop something like that. But..<shrug>.. Anyway, this is perfect. Just what I'm looking for. Thanks to everyone, and I feel a little sheepish for not looking in 'all' the versions of the handbook.

Joel - AG4QC

"Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote in message news:P8yA8.10303$rO2.2136522@news6-win.server.ntlworld.com...
> > A two-tone test oscillator is the easiest means to conduct the tests.
> > I have one I built from an old Radio Handbook (not ARRL) that uses an
> > LM324. You need a low distortion oscillator and a 555 is not it. Try
> > a search on the Internet. You may even find a kit available.
> ==========
> In ARRL Handbook 1986 ,page 25.27 you can find a 2 tone generator (700 -
> 1900 Hz) with 3 double J-FET Opamps , LF-353N running on two 6v batteries
> .
> Complete with Hi&Lo Z output and 0,-10,-20,-30,-40,-50 dB attenuator .
>
> In ARRL Handbook 1995 , page 26.38 you can find a hybrid combiner for signal
> generators (for 2 ranges : 1-50 MHz and 50 - 500 MHz) for 2 tone testing by
> applying RF ,as per Richard Hosking' suggestion.
> To test a (linear) power amplifier one would need to add an intermediate
> amplifier.
>
> Frank gm0csz.kn6wh@ntlworld.com
>
>
>
>
>

3343. Re: RS HTX-242 Repair Issues

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-03 20:13:26 UTC
From: john graesser <graesser@tca.net>
Message-ID: <ud5rlrhf66kk8f@corp.supernews.com>
Source record: 44385
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

"KC8PMX" <kc8pmx@NOSPAMdiamondcs.net> wrote in message
news:aattec3238f@enews1.newsguy.com...
> I have a Radio Shack HTX-242 mobile radio that the backlighting for the
> display has failed. Does anyone have experience with this? Is the
lighting
> the "grain of wheat" type of bulbs or ?? Does anyone know what ratings
> these bulbs are if they are "grain of wheat" types? Any particular
problems
> or other headaches with the replacment of these?
>
> I barely trust my "fat fingers" in such a small area, especially with a
> soldering iron so I want to take any and every precaution. Any
suggestions
> would be great!
>
>
> Thanks in advance,
>
>
> --
> Ryan, KC8PMX
> FF/MFR

It appears they should be 6.3v 40ma pilot lamps. You can check out the parts
list at RSonline. I need to replace mine as well.

http://www.radioshack.com/ProdSupport/DocumentDetail/DocumentDetailIndex.asp
?P=support_electronics&D=3157&T=htm

thanks, John.
KC5DWD

3344. field stregth volts/meter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-03 22:43:13 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <ud64k3o372hq55@corp.supernews.com>
Source record: 44386

Received field strength is reported as so many microvolts per meter. I recall reading an old article that shows measuring this value using a loop antenna with a calibrated signal generator in line. The loop is oriented for maximum reading on the receiver S meter which is recorded. Next the loop is oriented for minimum reading and the signal generator adjusted for the same S meter reading. The questions are how is the signal gen inserted so the impedance isn't distrubed and how does one determine the length in a loop? Any ideas or direction to good practical info appreciated.
tnx
hank wd5jfr

3345. "Natural Radio" VLF Discussion Group

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-03 23:20:42 UTC
From: korgans@aol.com
Message-ID: <20020503192042.04365.00006587@mb-bh.aol.com>
Source record: 44387

This is an announcement concerning an e-mail based "natural radio" VLF discussion group. This group contains members from all walks of life who are interested in discussing "natural radio" and related topics to "natural radio" VLF monitoring. VLF listeners now have an outlet for discussing "natural radio" related issues and similar topics in a group format. Current VLF activity, whistlers, chorus, schematics, receiver designs, etc., are all welcome.

The natural radio VLF group is a discussion group dedicated to those who enjoy monitoring radio frequencies in the VLF radio spectrum and slightly below the VLF spectrum (3-30 KHz). We listen to the amazing "radio" sounds created by planet earth such as whistlers, chorus, tweeks, risers and hiss on simple VLF receivers. Listen to beautiful bird like sounds created by the northern lights while watching them at the same time! Listen to an oncoming solar flare impact our planet's ionosphere and magnetosphere live! Listen to distant lightning ring during nighttime hours. Study sprites and jets! Discuss VLF receiver designs. The sky is the limit when it comes to VLF!

To join the VLF discussion group simply send a blank e-mail to VLF_Group-subscribe@yahoogroups.com. Once subscribed, all messages sent to VLF_Group@yahoogroups.com will be sent to all members who are part of the VLF discussion group. The VLF group is an e-mail reflector and is a recent endeavor to try to tie VLF listeners together by e-mail for discussion and alert purposes. Feel free to subscribe or unsubscribe from this group at any time. You will be sent a confirmation e-mail and further information upon successfully subscribing to the list.

For further information check the VLF group web site:
http://groups.yahoo.com/group/VLF_Group/

Shawn Korgan
VLF Group List Owner
NASA INSPIRE Team I-01

3346. FT: HF amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-04 00:53:16 UTC
From: "R. Belcher" <randy.belcher@verizon.net>
Message-ID: <0iGA8.1707$n3.956@nwrddc01.gnilink.net>
Source record: 44388
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Amp Supply Co. LA-1000 HF Amp. 160-10m

Have for sale or trade an Amp Supply Co. LA-1000 HF amplifier. Late 80's model, with Ameritron serial placard. Manual states 500-600w output. Tubes are doing about 450 on 80m. Amp is in good shape and working perfectly but has a few scratches. Power switch has been replaced with incorrect but heavy-duty switch. Looking to sell or trade for a Dualband mobile such as TMV-7A or similar. Will only consider Icom, Kenwood and Yaesu mobile ham radios depending on mod availability. Will also consider only Motorola/Radius handhelds or mobiles (Max, GM, M1225, etc, as well. Jedi, Radius or Pro series.) Prefer VHF. U-ship, (will average $20-$35 CONUS).
Thanks and please reply direct,
Randy, KC8CPK

See photos here:
http://members.bellatlantic.net/~vze2shzj/forsale/la_front.jpg

http://members.bellatlantic.net/~vze2shzj/forsale/la_rear.jpg

http://members.bellatlantic.net/~vze2shzj/forsale/la_placard.jpg

http://members.bellatlantic.net/~vze2shzj/forsale/la_top.jpg

http://members.bellatlantic.net/~vze2shzj/forsale/la_switch.jpg

3347. Re: Question about large variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-04 01:44:49 UTC
From: jrobmills@aol.comRX320
Message-ID: <20020503214449.07686.00006320@mb-mp.aol.com>
Source record: 44389

B&W is still in business, don't think they are still in the varable cap biz but they might be able to give you some info on your capacitor.
www.bwantennas.com/

Rob Mills ~~~

3348. FS: Old Radio Books, 1920's - 40's

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-04 03:11:07 UTC
From: oldbooks78@aol.com
Message-ID: <20020503231107.11923.00007557@mb-mk.aol.com>
Source record: 44390

I currently have the following old radio books available. Media Mail postage is $3 for the first book and $1 for each additional item. The books are:

Rider, John F. The Cathode-Ray Tube at Work published by Rider Publishing, 1944. The 336 page hardbound book is in very good condition, clean with no page tears or pen marks except for a brief gift inscription inside the front cover. Dust jacket is in about very good condition. An early thorough treatment of cathode-ray tubes and their applications. Chapter titles include THE THEORY OF THE TUBE / SWEEP CIRCUITS / VOLTAGES ON BOTH SETS OF PLATES / COMMERCIAL CATHODE-RAY OSCILLOGRAPHS / PRACTICAL APPLICATION OF THE CATHODE-RAY OSCILLOGRAPH / ALIGNMENT OF TUNED CIRCUITS / THE A-F FREQUENCY MODULATOR / AUTO RADIO VIBRATOR TESTING / TRANSMITTER ADJUSTMENT / OTHER APPLICATIONS. A nice item. Available for $10.

Lauer, Henri and Harry L. Brown Radio Engineering Principles published by McGraw-Hill, 1920. First edition, second impression. The 300 page hardbound book is in very good condition, clean with no page tears or pen marks except for a previous owners name inside the front cover. Very clean cloth covers with gold lettering on the spine, very bright. A nice early text on the radio, with many great photos/illustrations. Includes a section on early aviation radio. Available for $18.

Measurements Development Laboratory of the Sperry Gyroscope Company Microwave Transmission Design Data published by Sperry Gyroscope Company, 1944. Publication No. 23-80. The 215 page hardbound book is in very good condition, clean with no page tears or pen marks, and a strong binding. Originally issued during WWII as a "confidential" document. Chapter topics include General formulae for concentric lines; Attenuation in concentric lines; Reflections and impedance matching; General formulae for wave guides; Attenuation in wave guides; Reflections and impedance matching in wave guides; Wave guide tees and bends; Wave guides filled with dielectric material; Dielectric material: Cavity resonators; and Measurement techniques. A neat early book on ultra-high frequency radio waves. Available for $10.

Everitt, William Littell Communication Engineering published by McGraw-Hill, 1937. Second edition, fourth impression. The 727 page hardbound book is in very good condition, clean inside and out, with a sturdy binding. A nice early radio engineering text. Available for $10.

Nilson, Arthur R. and J. L. Hornung Practical Radio Communication: Principles, Systems, Equipment, Operation Including Short-Wave and Untra-Short-Wave Radio published by McGraw-Hill, 1935. First Edition, fifteenth impression. The 758 page hardbound book is in very good condition, clean with no page tears or pen marks except for a previous owners name inside the front cover. Blue leather-like covers. Overall, a particularly nice copy of this early radio text. Available for $15.

Rider, John F. FM, An Introduction to Frequency Modulation published by Rider Publishing, 1946. The 142 page hardbound book is in very good condition, clean with no page tears or pen marks, and a strong binding. A nice early look at frequency modulation. Available for $9.

Markus, John and Vin Zeluff (editors) Electronics for Engineers; Reference Articles, Charts, and Graphs from Electronics Magazine published by McGraw-Hill, 1945. The 390 page hardbound book is in fine condition, fresh and clean inside and out. Original brown paper cover with sticker title labels in near fine condition. First edition, fifth impression. The book is a collection of radio communication, radio broadcasting, television and radar design articles that have appeared in Electronics Magazine from 1939-1944. An excellent copy, about as nice as one might find anywhere. Available for $14.

ARRL The Radio Amateur's Handbook, 32nd Edition, 1955 published by the American Radio Relay League, 1955. The 600+ page softbound book is in very good condition, clean with no page tears or pen marks, and a strong binding. Some wear at the base of the spine, with a small 3/8 inch tear along the lower front spine edge, but not bad at all. Overall a very nice copy of this early ARRL handbook. Available for $10.

Rider, John F. And Seymour D. Uslan FM Transmission and Reception published by John F. Rider Publisher, 1948. No Jacket. First Printing. The 409 page hardbound book is in very good condition, clean with no page tears or pen marks except for a previous owners name inside the front cover. Covers the basic principles underlying the operation of FM transmitters and receivers. Available for $8.

If interested in any of the above, please email to "Oldbooks78@aol.com" to reserve. Best regards.

Dave

3349. Monster Variable Capacitor!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-04 13:29:23 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <TmRA8.5013$vT1.390339@bgtnsc04-news.ops.worldnet.att.net>
Source record: 44391

I recently acquired a 5 gang variable capacitor. It is 9"X3". Each gang is
14-400 Pf.
It weighs 3 lbs & has brass gears. Anybody have any idea what this was used
for?
(I thought of trying to make a variable bug zapper from it)

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.351 / Virus Database: 197 - Release Date: 4/19/02

3350. Re: Monster Variable Capacitor!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-04 14:27:47 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CD3EFE3.9D85F459@netscape.net>
Source record: 44392

marvin rosen wrote:
>
> I recently acquired a 5 gang variable capacitor. It is 9"X3". Each gang is
> 14-400 Pf.
> It weighs 3 lbs & has brass gears. Anybody have any idea what this was used
> for?
> (I thought of trying to make a variable bug zapper from it)

Maybe from an old 1920s TRF broadcast radio.

-Bill

3351. Re: Question about large variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-04 15:36:59 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ud80592luha807@corp.supernews.com>
Source record: 44393

You should be able to get some idea of the value by looking at similar caps. R.F. Parts has a reasonable selection of transmitting caps.

Variable caps are pretty simple ... you could measure the capacitance with a cap meter. If you don't have access to a cap meter you could build up a bridge including the cap, excite it with RF, and with the help of an RF voltmeter and a little math you can figure it out, too. At worst, you could measure the size of the plates and a little math will get you close. Similarly, the voltage rating is nothing more than another way of measuring the plate spacing.

B&W was a pretty common provider of transmitting caps a while back so perhaps a browse through some old copies of the ARRL handbook might come up with some specs, too.

..

"Mercurus" <azoth@37.com> wrote in message
news:miAA8.28057$_j4.765738@news1.east.cox.net...
> Hey, I got this very large variable cap out of a ham transmitter, I've
never
> actually seen one this big in person, it was out of a 10 meter ham
> transmitter, The engraving says Barker and Williamson
> Type CX 49 A
> Does anyone have the tech specs on this or how much it would be worth?
> Thanks
> Azoth
>
>

3352. Re: Monster Variable Capacitor!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-04 15:38:30 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ud8059in0mas08@corp.supernews.com>
Source record: 44394

".Bill :-)" <TheRealExray@netscape.net> wrote in message
news:3CD3EFE3.9D85F459@netscape.net...
>
> Maybe from an old 1920s TRF broadcast radio.
>

Something that big almost has to be a transmitting cap, although I can't
imagine what you would use 5 gangs for.

..

3353. Re: Monster Variable Capacitor!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-04 17:11:00 UTC
From: jrobmills@aol.comRX320
Message-ID: <20020504131100.11118.00006978@mb-ca.aol.com>
Source record: 44396

I don't recall the model number but I once had a military surplus direction finder receiver that had a cap similar to that in it. It was made by Bendix. The whole unit was probably 12X12X14 or 16 and was gear driven from a remote similar to that of the old BC/command series.

Rob Mills ~~~

3354. Re: "Natural Radio" VLF Discussion Group

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-04 17:11:29 UTC
From: Phillip Jockell <pjockXXX@verizon.net>
Message-ID: <Xns9204862DEF565pjockverizonnet@199.45.49.11>
Source record: 44395

I would be interested in a newsgroup, but not the "Yahoo based"
groups. Just in case anyone is keeping count of such...

Phil - N4GWV

korgans@aol.com (Korgans) wrote in
news:20020503192042.04365.00006587@mb-bh.aol.com:

> This is an announcement concerning an e-mail based "natural radio" VLF
> discussion group. This group contains members from all walks of life
> who are interested in discussing "natural radio" and related topics to
> "natural radio" VLF monitoring. VLF listeners now have an outlet for
> discussing "natural radio" related issues and similar topics in a
> group format. Current VLF activity, whistlers, chorus, schematics,
> receiver designs, etc., are all welcome.
> ...
> For further information check the VLF group web site:
> http://groups.yahoo.com/group/VLF_Group/
>
> Shawn Korgan
> VLF Group List Owner
> NASA INSPIRE Team I-01

3355. Re: Monster Variable Capacitor!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-04 17:53:07 UTC
From: Peter Voelpel <peter.voelpel@t-online.de>
Message-ID: <ab179oijg02$1@news.t-online.com>
Source record: 44297

xpyttl schrieb in Nachricht ...
>".Bill :-)" <TheRealExray@netscape.net> wrote in message
>news:3CD3EFE3.9D85F459@netscape.net...
>Something that big almost has to be a transmitting cap, although I can't
>imagine what you would use 5 gangs for.

Above is very likely , as you need loading capacitor values
between 100 and 4000 pf depending on impedance and band.
Gangs will be switched (added) for lower frequencies.

Peter, DF3KV

3356. Repair of Bird Elements

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-04 18:26:24 UTC
From: J Koli <jkolin@optonline.net>
Message-ID: <kJVA8.130020$sI3.29672998@news02.optonline.net>
Source record: 44298

Anyone have experience with repairing Bird Wattmeter elements that can advise on parts list and diagrams?

I opened a bad 50H and find a burned component and a glass diode. Can't figure out what that burned components is. And...someone said they normally don't come with a glass diode.

Thanks....Jay NE2Q

jkolin@cloud9.net

3357. Repair of Bird Elements

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-04 18:26:40 UTC
From: J Koli <jkolin@optonline.net>
Message-ID: <AJVA8.130024$sl3.29673593@news02.optonline.net>
Source record: 44299

Anyone have experience with repairing Bird Wattmeter elements that can advise on parts list and diagrams?

I opened a bad 50H and find a burned component and a glass diode. Can't figure out what that burned components is. And...someone said they normally don't come with a glass diode.

Thanks....Jay NE2Q

jkolin@cloud9.net

3358. Re: Monster Variable Capacitor!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-04 18:44:09 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CD42BF9.7C64F4B5@netscape.net>
Source record: 44300

```
xpyttl wrote:
>
> ".Bill :-)" <TheRealExray@netscape.net> wrote in message
> news:3CD3EFE3.9D85F459@netscape.net...
> >
> > Maybe from an old 1920s TRF broadcast radio.
> >
>
> Something that big almost has to be a transmitting cap, although I can't
> imagine what you would use 5 gangs for.
>
> ..

Ones that size are not at all unusual in some of the multi-stage TRF
sets.
-Bill
```

3359. Re: Monster Variable Capacitor!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-04 19:29:00 UTC
From: k7itm@aol.com
Message-ID: <3200347.0205041129.4d05ca79@posting.google.com>
Source record: 44301

Sounds like about the same total capacitance as the 4-gang 600pF one I
have...but I _know_ what that was used in. (Maybe I'll use mine to
tune an LF loop sometime...)

One fun thing you can do with it, if its insulation is good enough to
hold a charge for a few seconds, is to set it to max capacitance and
charge it to, say, 200V. Disconnect the charging voltage, and open
the plates (turn toward less capacitance). Watch/listen for sparks.

Cheers,
Tom

"marvin rosen" <raghead@worldnet.att.net> wrote in message
news:<TmRA8.5013$vT1.390339@bgtnsc04-news.ops.worldnet.att.net>...
> I recently acquired a 5 gang variable capacitor. It is 9"X3". Each gang is
> 14-400 Pf.
> It weighs 3 lbs & has brass gears. Anybody have any idea what this was used
> for?
> (I thought of trying to make a variable bug zapper from it)
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.351 / Virus Database: 197 - Release Date: 4/19/02

3360. Re: "Natural Radio" VLF Discussion Group

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-04 22:26:47 UTC
From: Dave Holford <holford@sympatico.ca>
Message-ID: <3CD46027.A4229855@sympatico.ca>
Source record: 44302

Phillip Jockell wrote:
>
> I would be interested in a newsgroup, but not the "Yahoo based"
> groups. Just in case anyone is keeping count of such...
>
> Phil - N4GWV
>

I agree

Dave VE3HLU

3361. Re: Monster Variable Capacitor!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-05 01:12:41 UTC
From: garigue <garigue@attbi.com>
Message-ID: <dG%A8.63958$ao1.11820@rwcrnsc54>
Source record: 44305

I had one from a BC=??? TRF rx . The unit had a plug in coil set that went into the side of the box. T he tubes if I remember were of the double digit type. The rx was new when I bought it in 64 and made if I remember correctly by Emerson?? Never could get the darn thing to work as there was a myriad of connections and a control box between the rx-tx. 73 Tom KI3R

"marvin rosen" <raghead@worldnet.att.net> wrote in message news:TmRA8.5013$vT1.390339@bgtnsc04-news.ops.worldnet.att.net...

> I recently acquired a 5 gang variable capacitor. It is 9"X3". Each gang is
> 14-400 Pf.
> It weighs 3 lbs & has brass gears. Anybody have any idea what this was used
> for?
> (I thought of trying to make a variable bug zapper from it)
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.351 / Virus Database: 197 - Release Date: 4/19/02
>
>

3362. Re: Ten Tec Corsair PTO rebuild ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-05 01:36:00 UTC
From: Walter <walter@accessus.net>
Message-ID: <300B8.60872$q8.6264184@bin3.nnrp.aus1.giganews.com>
Source record: 44306

Doug, you should not have much trouble rebuilding the PTO.
Check with the Ten-Tec reflector at http://www.contesting.com
if you get into troubles. T-T sells a repair kit and you can visit
with
the techs when you order it.
73 Walter, AG5P

"Douglas Snowden" <snowden@peoplepc.com> wrote in message
news:ud918up077q2d1@corp.supernews.com...
> Is this doable by someone with ordinary mechanical
> skills? Advice ???
>
> Doug N4IJ
>
>
>
>
>

3363. 6m linear amp(construction & schematics)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-05 03:11:14 UTC
From: "AH FRANSMAN [ZR1TRD]" <trdzr1@telkomsa.net>
Message-ID: <ab2a97$4bq$1@ctb-nnrp1.saix.net>
Source record: 44307

Hi Guys

I need the construction & schematics for a 6m transistorized linear amp at least 500w

Any info would be greatly appreciated.

Many thanks in advance.

73 Andr&#65533; ZR1TRD

3364. Ten Tec Corsair Modifications ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-05 04:11:43 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <ud90q4plv78iff@corp.supernews.com>
Source record: 44303

Anyone know if there are any mods for the Corsair
on the "net". I would like to improve the audio. It is
a bit noisy for me.

Doug N4IJ

3365. Ten Tec Corsair PTO rebuild ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-05 04:19:48 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <ud918up077q2d1@corp.supernews.com>
Source record: 44304

Is this doable by someone with ordinary mechanical
skills? Advice ???

Doug N4IJ

3366. Re: Monster Variable Capacitor!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-05 04:52:00 UTC
From: news <rlane7301@comcast.net>
Message-ID: <QT2B8.73974$N8.5341849@bin5.nnrp.aus1.giganews.com>
Source record: 44308

"J Rob" <jrobmills@aol.comRX320> wrote in message
news:20020504131100.11118.00006978@mb-ca.aol.com...
> I don't recall the model number but I once had a military surplus
direction
> finder receiver that had a cap similar to that in it. It was made by
Bendix.
> The whole unit was probably 12X12X14 or 16 and was gear driven from a
remote
> similar to that of the old BC/command series.
>
> Rob Mills ~~~
>
> I have one of those DF receivers that I am trying to set up to monitor
VLF. Anyone know the model number? I would like to get a schematic from
somewhere. The receiver tunes from 15 khz to about 1800 khz. The cap tunes
the antenna, loop antenna, rf amp, 1st det and osc.

Ralph
>
>
>
>
>

3367. Re: 6m linear amp(construction & schematics)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-05 11:07:17 UTC
From: Trevor Day <Trev@southwestuk.demon.co.uk>
Message-ID: <Ejtut6ClJR18EwTk@southwestuk.demon.co.uk>
Source record: 44309

In article <ab2a97$4bq$1@ctb-nnrp1.saix.net>, "AH FRANSMAN [ZR1TRD]"
<trdzr1@telkomsa.net> writes
>Hi Guys
>
>I need the construction & schematics for a 6m transistorized linear amp at
>least 500w
>
>Any info would be greatly appreciated.
>
>Many thanks in advance.
>
>73 Andrï¿½ ZR1TRD

Hi Andre,
Try this from the UKSMG web site; not quite 500w as it is billed as a
450 watt pa, but it seems to fit your needs in all other respects.

http://www.uksmg.org/amp.htm

gl Trev G3ZYY
--
Trevor Day

3368. Re: 6m linear amp(construction & schematics)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-05 11:33:32 UTC
From: "atec77(nospam)" <"atec77(nospam)"@hotmail.com>
Message-ID: <3cd5189a$0$15147$afc38c87@news.optusnet.com.au>
Source record: 44310

interesting this , some years ago (12 or so) I built a blw96 amp for 6
and 2 metres due to the prompting from a radio engineer I meet here in
Brisbane . Both work very well .

Trevor Day wrote:
>
> In article <ab2a97$4bq$1@ctb-nnrp1.saix.net>, "AH FRANSMAN [ZR1TRD]"
> <trdzr1@telkomsa.net> writes
> >Hi Guys
> >
> >I need the construction & schematics for a 6m transistorized linear amp at
> >least 500w
> >
> >Any info would be greatly appreciated.
> >
> >Many thanks in advance.
> >
> >73 André ZR1TRD
>
> Hi Andre,
> Try this from the UKSMG web site; not quite 500w as it is billed as a
> 450 watt pa, but it seems to fit your needs in all other respects.
>
> http://www.uksmg.org/amp.htm
>
> gl Trev G3ZYY
> --
> Trevor Day

3369. Re: "Natural Radio" VLF Discussion Group

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-05 12:06:16 UTC
From: la8ak.xnd@online.no
Message-ID: <3cd4f196.377921286@news.online.no>
Source record: 44311

On Sat, 04 May 2002 18:26:47 -0400, Dave Holford
<holford@sympatico.ca> wrote:

>
>
>Phillip Jockell wrote:
>>
>> I would be interested in a newsgroup, but not the "Yahoo based"
>> groups. Just in case anyone is keeping count of such...
>>
>> Phil - N4GWV
>>
>
>I agree
>
>Dave VE3HLU

I've blocked against certain type of rubbish messages with MSOE, but
with such newsreflectors you have to check the dustbin to see how many
of your desired messages are killed

LA8AK
--
remove ,xnd to reply

3370. 7 mhz qrp amp 'brick' needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-05 13:25:48 UTC
From: hexter@blazenet.net
Message-ID: <udacmsa8flj689@corp.supernews.com>
Source record: 44312

I have built a very nice AM modulated 7 mhz qrp rig with nice audio characteristics (115% forward / 100% negative) and it's output is 10vpp carrier, 22vpp peak modulation, at 500 ohms. I run it through a ferrite balun for 50 ohm antenna match. I am looking for an integrated circuit 'brick' to give me 5 watts of carrier, with 25 watts of reserve for peak modulation passage. Supply voltage can be anything, I will build the supply. I am guessing I need a 25 watt brick with perhaps 30db gain. Anzac perhaps? Any ideas (under $100)
TNX og 73

3371. ft7100 Mic and PTT help. Please!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-05 20:43:06 UTC
From: "AcKBaR[KAC]" <>
Message-ID: <8a6bdugonuq2e59v7ts8v9fv7mq7brno0r@4ax.com>
Source record: 44313

I am trying to wire up a ft7100 to one of my motorcycles like I have my IC 706 on another.

The only problem I am having is how to wire in a mic element and a PTT to the jack on the side of the head. When I touch PTT to ground, it does not key the radio. I can key the radio by grounding the PTT pin on the data jack, but I do not think that allows audio.

I want to ad a simple radio shack mic element for testing till I get to Dayton to buy a Heil.

Any suggetions?

3372. Motorola synth chip

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-06 01:40:53 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3CD5DF25.28F702A5@visi.com>
Source record: 44315

Hey gang,
Does anyone know of a good source of the MC145151P2 Motorola synth
chip?

Tnx

Bob WB0POQ

3373. Re: Repair of Bird Elements

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-06 02:17:00 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <6rg9du8iqqs6j241ln97frmq43oa7hn8dv@4ax.com>
Source record: 44314

On Sat, 04 May 2002 18:26:40 GMT "J Koli" <jkolin@optonline.net>
wrote:

>Anyone have experience with repairing Bird Wattmeter elements that can
>advise on parts list and diagrams?
>
>I opened a bad 50H and find a burned component and a glass diode. Can't
>figure out what that burned components is. And...someone said they normally
>don't come with a glass diode.

I'm pretty sure that each of them has a diode and a resistor. The
diode is the detector for the meter, and the resistor, together with
the size and shape of the pickup loop, determine the sensitivity.

-

Jim Adney jadney@vwtype3.org
Madison, Wisconsin USA

3374. Re: Motorola synth chip

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-06 02:34:28 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CD5EBFB.5F90@pop.removethistomailme.net>
Source record: 44316

```
Bob Liesenfeld wrote:
>
> Hey gang,
> Does anyone know of a good source of the MC145151P2 Motorola synth
> chip?
>
> Tnx
>
> Bob WB0POQ

http://www.findchips.com

-- jm

-----------------------------------------------------
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
-----------------------------------------------------
```

3375. Wind your own multilayer coils

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-06 02:36:37 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ab4q7l$8j2$1@knossos.btinternet.com>
Source record: 44317

NOW AVAILABLE ** New Program "MULTILAY.exe"

Program MULTILAY assists with the design and estimating performance of multilayer air-core coils, wound in bobbins or slots, often used in antenna circuits, preselectors, of radio receivers at low HF, LF and at frequencies down to audio in such applications as loud speaker cross-over networks.

Such coils are used in non-critical applications where high Q is not needed, precise inductance values are unnecessary and a solenoid is ruled out because of it's size in any case.

A hank of coax used as a choke in an antenna feedline can be approximated by this program. There are numerous other applications where home constructors may wish to wind by hand their own simple multilayer coils.

A coil of rectangular winding cross-section is specified simply in terms of inside diameter, outside diameter, axial length and the number of turns. Wire diameter and thickness of wire insulation is taken into account. A fairly wide range of coil proportions is covered by the program.

Inductance is computed to within 5 or 10 percent. Coils are not intended for precision applications and can be hand-wound. Scramble-wound is often acceptable. Self-capacitance, self-resonant frequency and Q are estimated with useful precision.

Use your imagination/ingenuity to find coil formers.

Download MULTILAY in a few seconds from website below. Run and obtain amswers immediately.

$$$$$$$$$$$$$$$$$$$$$$$$$
Regards from Reg G4FGQ
Free Radio Modelling Software
Go to http://www.g4fgq.com
$$$$$$$$$$$$$$$$$$$$$$$$$

3376. Re: RS HTX-242 Repair Issues

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-06 03:39:55 UTC
From: KC8PMX <kc8pmx@NOSPAMdiamondcs.net>
Message-ID: <ab638i31lec@enews4.newsguy.com>
Source record: 44322
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Many thanks.... I will be checking that out.

Ryan KC8PMX

"john graesser" <graesser@tca.net> wrote in message
news:ud5rlrhf66kk8f@corp.supernews.com...
>
> "KC8PMX" <kc8pmx@NOSPAMdiamondcs.net> wrote in message
> news:aattec3238f@enews1.newsguy.com...
> > I have a Radio Shack HTX-242 mobile radio that the backlighting for the
> > display has failed. Does anyone have experience with this? Is the
> lighting
> > the "grain of wheat" type of bulbs or ?? Does anyone know what ratings
> > these bulbs are if they are "grain of wheat" types? Any particular
> problems
> > or other headaches with the replacment of these?
> >
> > I barely trust my "fat fingers" in such a small area, especially with a
> > soldering iron so I want to take any and every precaution. Any
> suggestions
> > would be great!
> >
> >
> > Thanks in advance,
> >
> >
> > --
> > Ryan, KC8PMX
> > FF/MFR
>
> It appears they should be 6.3v 40ma pilot lamps. You can check out the
parts
> list at RSonline. I need to replace mine as well.
>
>
http://www.radioshack.com/ProdSupport/DocumentDetail/DocumentDetailIndex.asp
> ?P=support_electronics&D=3157&T=htm
>
> thanks, John.
> KC5DWD
>
>

3377. Re: Monster Variable Capacitor!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-06 05:15:44 UTC
From: jrobmills@aol.comRX320
Message-ID: <20020506011544.11103.00007603@mb-ca.aol.com>
Source record: 44318

> Anyone know the model number?

Wish I could remember but it's been 20 - 25 years since it passed through my hands. About all I can remember is the sight of that air variable, longest one I ever saw.
This is a long shot but the surplus index in the back of surplus conversion manual #1 lists a receiver with the model # of ADF (Navy) and shows it to tune 15 khz to 1750 khz and has 8 tubes, 3 ea 6d6, 2 ea 76, 2 ea 6c6 and one 41. It gives no other information.

Rob Mills ~~~

3378. Re: Monster Variable Capacitor!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-06 05:33:29 UTC
From: jrobmills@aol.comRX320
Message-ID: <20020506013329.11106.00007377@mb-ca.aol.com>
Source record: 44319

Doing a quick search on the internet I find that the ADF is also known as an ARN-6 but still no info other than tube line up and freq's. I let conversion manual 3 slip out the door, maybe something there.
RM~

3379. For Sale BLUE and WHITE LED Lamp for $0.8 each NEW

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-06 06:03:47 UTC
From: eugene474@yahoo.com
Message-ID: <3cd61cc3_4@news.nntpserver.com>
Source record: 44320

Item 01
BLUE LED - 2,500mcd 20 degrees. Water Clr. Optics. T1 3/4 5mm
465nm $0.8/each Brand New

Item 02
WHITE LED - 2,500mcd 20 degrees. Water Clr. Optics. T1 3/4 5mm
GaN with phosphor coating $0.8/each Brand New

Item 03
Kingbright LF819 - 10mm RGB Full Color 3 leds in 1 LED LAMP
"lightsaucer led" $10/each Brand New

Item 04
HLMP Blue LED Light Bar - 20mm X 9mm, white Diffused optics,36mcd
at 100 degrees viewing angle. X-Y Stackable
$1.4/each Brand New

email me at eugene474@yahoo.com shipping cost is $2 if you want
to order pls. include the item no. Payment via PAYPAL

3380. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-06 13:15:48 UTC
From: Lenny Boutin <lboutin@whoi.edu>
Message-ID: <3CD68204.5D5DA9C6@whoi.edu>
Source record: 44321
Body handling: Binary attachment payload not displayed: lboutin.vcf

Dear Jack,

I just now saw a discussion on the AM Window, and it is way down the list of their bulletin board. Look for Class E AM rigs or some such thing. Here's the web site of one of the guys heavily involved with SS AM and PWM: http://www.netway.com/~stevec/ham/classe.htm This guy has been doing this stuff for years and years. Before he "went solid-state" he also built and documented tube PWM rigs as well. He's cutting edge and he knows how to build these things inexpensively, so look him up at the above link. His name is Steve Cloutier and his call is WA1QIX.
Some of his stuff can also be found at the AM International site: http://www.amfone.net/

Good luck, Lenny

Jack Taylor wrote:

> Lenny, I didn't find info on PWM at the amwindow.org address. Can you give
> me a pointer?
>
> 73 de Jack
>
> Lenny Boutin wrote in message <3CCFDC37.68FBEE87@whoi.edu>...
> >Yup, There is activity on AM on all bands. Yes, there are people using
> >400W Class E MOSFET amps modulated by PWM modulators. Plans to build them
> >are the following website: http://www.amwindow.org. Check it out!
> >Hope this helps, LennyB, W1REA
> >
> >"r.crowley" wrote:
> >
> >> Is this method used anywhere? With modern digital circuitry, it seems
> >> almost easier to do than traditional methods of amplitude modulation.
> >> (Assuming appropriate filtering to produce proper sine-wave output, not
> >> square wave!)
> >>
> >> Is there any AM activity on amateur bands anymore?
> >

[One or more binary attachments are retained only in the source text.]

3381. Re: Pulse-width AM transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-06 16:03:57 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <ab69hdbvc0@206.97.58.186>
Source record: 44323

Thanks, Lenny

I've checked out that site and it definately has excellent material!

73 de Jack

Lenny Boutin wrote in message <3CD68204.5D5DA9C6@whoi.edu>...
>Dear Jack,
>
>I just now saw a discussion on the AM Window, and it is way down the list
of
>their bulletin board. Look for Class E AM rigs or some such thing. Here's
the
>web site of one of the guys heavily involved with SS AM and PWM:
>http://www.netway.com/~stevec/ham/classe.htm This guy has been doing this
>stuff for years and years. Before he "went solid-state" he also built and
>documented tube PWM rigs as well. He's cutting edge and he knows how to
build
>these things inexpensively, so look him up at the above link. His name is
>Steve Cloutier and his call is WA1QIX.
>Some of his stuff can also be found at the AM International site:
>http://www.amfone.net/
>
>Good luck, Lenny
>
>

3382. 12AT7 Vacuum tube question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-06 17:06:27 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0205060906.19a9c12e@posting.google.com>
Source record: 44324

Will this, or similar tubes (12AU7, 12AX7, etc.) work as a mixer at 146 MHz?

Jim
N8EE

3383. Re: 12AT7 Vacuum tube question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-06 17:44:06 UTC
From: troglodite@aol.com
Message-ID: <20020506134406.07888.00012013@mb-mv.aol.com>
Source record: 44325

>Will this, or similar tubes (12AU7, 12AX7, etc.) work as a mixer at 146 MHz?

The 12AT7 works fine as a mixer for 2m. It was used in the Gonset Communicator and many other famous 2m rigs. The 12AU7 would also work, but does not have quite the gain. The 12AX7 is primarily intended for audio use, and is not suitable for RF.

Doug Moore KB9TMY

3384. Re: 9:1 balun/transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-06 22:49:32 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <hMDB8.2441$hg3.593680@news11-gui.server.ntli.net>
Source record: 44326

> I need to match a crystal filter of unknown terminal impedance possibly
> around 450/500ohms. to 50 ohms;Can anyone help, have looked at several
> sources but am confused.
=====
> I need to match a crystal filter of unknown terminal impedance possibly
> around 450/500ohms. to 50 ohms;Can anyone help, have looked at several
> sources but am confused. Thanks,
===
Hello Brian , I have an excellent book on baluns and ununs
'Building and Using Balans and Ununs' by Jerry Sevick , W2FMI
These devices are meant for matching transmitters to antennas ,but smaller
varieties can obviously be used for your type of application.
An example in the book for a 50 Ohm to 600 Ohm transformer comprises a
1:1.33 Unun followed by a 1: 9 Balun.
There are also 50 ohm to 450 Ohm baluns described.
The principles apply to any application ,you could just copy the winding
ratios and use the correct toroid composition for the required freq range.

If you are interested I can scan the relevant pages in tif format ,attaching
these files to an e-mail . Just let me know

73 Frank gm0csz.kn6wh@ntlworld.com

PS : Tried to send the above info directly ,however the msg was returned
,reason : Domain name incorrectly configured ?

3385. Pacemaker/Defibrillator and RF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-07 03:28:45 UTC
From: wa0goz@arrl.net
Message-ID: <3CD749ED.22FE@arrl.net>
Source record: 44327

Seem's I'm going to have to have a pacemaker/defibrillator put in. In the booklets they gave me, it says to stay away from ham radio. Anyone have first hand experience with this?

Thanks and 73,

Henry WA0GOZ

3386. Wanted: AMP for 72 Mhz.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-07 03:45:49 UTC
From: Ziggy <where@there.com>
Message-ID: <N5IB8.34492$9c5.1423657@news2.west.cox.net>
Source record: 44328

Anyone know of the where and how of how to get an amplifier for 72Mhz? 1watt in - 3-4 watts out.

Thanks

3387. Scale software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-07 08:24:56 UTC
From: Don Vosper <don@vosperd.freeserve.co.uk>
Message-ID: <ab82uemgg1@news8.svr.pol.co.uk>
Source record: 44329

Does anyone know of any software for creating circular dials and scales.
Shareware or otherwise?
Thanks
Don M5AKY
Bristol UK

3388. Re: Pacemaker/Defibrillator and RF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-07 09:16:14 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <zZMB8.178$CN5.17632@news8-gui.server.ntli.net>
Source record: 44330

> Seem's I'm going to have to have a pacemaker/defibrillator put in. In
> the booklets they gave me, it says to stay away from ham radio. Anyone
> have first hand experience with this?
==========
No experience at all with the above ,but having read about the topic ,it
appears that low power operation in the QRP range does not affect a
pacemaker.

Frank gm0csz.kn6wh@ntlworld.com

3389. S: sheet of TH-G71 demod-IC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-07 09:59:27 UTC
From: Mario Roessler <mario.roessler@s2001.tu-chemnitz.de>
Message-ID: <3CD7A57F.7560CD5E@s2001.tu-chemnitz.de>
Source record: 44331

Hello !
I searc for a datasheet of the rx-ic of the kenwood TH-G71 handheld.
I want to modify it for 9k6 fsk, but i cant find any information about,
where
to get a signal in this rig.
tx modifikation seems to be like th-79 ... (same IC)

if you have a datasheet, please mail it.

73, Mario

3390. Re: Scale software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-07 13:51:30 UTC
From: Kent Haase <ijeh99@mb.sympatico.ca>
Message-ID: <KUQB8.725$D77.27309@news1.mts.net>
Source record: 44332

From the license agreement... "Graph Paper Printer is a shareware product.
You are granted a 7-day evaluation period"
Try getting it from http://webperso.easynet.fr/~philimar/graphpapeng.htm

Kent VE4KEH

3391. Re: Scale software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-07 14:37:39 UTC
From: k9wkj <k9wkj@hotmail.com>
Message-ID: <kDRB8.1210$eV4.52126@reggie.win.bright.net>
Source record: 44333

any vector drawing package that allows you to do a polar array will do the
job stupendously
cul de k9wkj
Don Vosper <don@vosperd.freeserve.co.uk> wrote in message
news:ab82uemgg1@news8.svr.pol.co.uk...
> Does anyone know of any software for creating circular dials and scales.
> Shareware or otherwise?
> Thanks
> Don M5AKY
> Bristol UK
>
>

3392. regen frontend loading problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-07 16:13:31 UTC
From: 4q <nospam@nospam-tek.com>
Message-ID: <ab8ubr0e2m@enews4.newsguy.com>
Source record: 44335

I recently built a transistor regen radio for the broadcast band. I use a MPF102 as the regen and I'm using a simple 100uH coil with 4 links for the anntena input and 6 links for the tickler. It works but I just happen to be about 5 blocks from KBRK which is one of the last of the big 50,000 watt am stations. They sit at 1420kHz but when I attach my anntena they cover from 800kHz to over 1600kHz. Oviously they are overloading the frontend. Is there anything I can do to limit the overload?

Rick Haub KC0GIX

3393. Re: Scale software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-07 16:29:19 UTC
From: Mike Allenson <mike@allenson.fsnet.co.uk>
Message-ID: <ab8vfbljf1@newsg1.svr.pol.co.uk>
Source record: 44334

Don

I use dial.exe and panel.exe from www.qsl.net/wb8rcr, to print front panels on thin card for home built equipment. Applied with double-sided sticky tape and covered with transparent book covering film they give a reasonable finish in a short time. You can also use a sacrificial paper version as a drilling template to guarantee line up with the panel mounted components. The panel programme needs a postscript printer or down load Ghost view and Ghost script to use a non postscript device.
Regards

Mike G3TGD

"Don Vosper" <don@vosperd.freeserve.co.uk> wrote in message news:ab82uemgg1@news8.svr.pol.co.uk...
> Does anyone know of any software for creating circular dials and scales.
> Shareware or otherwise?
> Thanks
> Don M5AKY
> Bristol UK
>
>

3394. Tuning dial / reduction drive mechanism

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-07 16:43:29 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <abanc2$g965r$2@ID-61331.news.dfncis.de>
Source record: 44343

I had an enquiry about where to obtain the type of dial with reduction drive mechanism which I have used in my valve regen (http://www.hanssummers.com/radio/valve/intro.htm), transistor regen (http://www.hanssummers.com/radio/transistor/intro.htm) and my current polyphase-method SSB receiver (photos at the bottom of http://www.hanssummers.com/radio/cwtx/index.htm).

Here is a page with some photos of it from various angles: http://www.hanssummers.com/radio/polyphase/pix.htm.

Since I inherited these dials from my late Father I have no idea where to buy or obtain them. Does anyone recognise these drives and know a source?

Also, the mechanism of the dial in my current receiver project is filled with dust and grime and has a horrible backlash. Can anyone suggest how best to clean and regrease the bearings?

72's and 73's

Hans Summers, G0UPL
http://www.HansSummers.Com

3395. 28volt 50 ampere power supply electrical diagram I need

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-07 17:04:25 UTC
From: Bruno IK1VHX <bruno.lusu@tin.it>
Message-ID: <tOTB8.13027$zW3.307861@news1.tin.it>
Source record: 44336

I'm looking for electrical diagram to homebrew power supply 28 volt 50
ampere type switching with or less trasformator from 220 volt line.
This supply to drive GRC-106 and relatives power amplifier.
Best regards to all
73 de IK1VHX

3396. RF probe construction

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-07 18:13:46 UTC
From: Bob Liesenfeld <robert.liesenfeld@neicoltech.org>
Message-ID: <3CD8195A.E5DA89F7@neicoltech.org>
Source record: 44337

Hey gang,
Looking through the copper pipe fitting section at the local Menards, I found a cool copper pipe fitting. It is a 6" length of 1/2" dia pipe, open on one end and turned down to a point at the other. I bought one and an end cap for about $1.50

Once home, I took a file to the pointy end to create a flat area about 1/8" in dia. Then I drilled a small hole through this flat spot clear through into the tube. Next I sawed the pipe in half as 6" was a bit too long.

Next, I cut a small piece of scrap PC board about 2" long, and just wide enough form a snug slide fit down the tube. Using a dermal tool, I cut several grooves through the copper foil to create isolated islands of copper. Next to the parts bin..... A .01uF cap, a hot carrier diode, and two series connected 2.2M resistors later, I had an RF probe a la http://www.io.com/~n5fc/rfprobe1.htm

The probe tip is a 1 1/2" finishing nail with a piece of spaghetti tubing over it that projects through the hole drilled in the end of the pipe. A small hole drilled in the end cap to pass the RG-174/U cable to the voltmeter was tack soldered to the end, while a lead terminated with an alligator clip is soldered to the outside of the tube for the gnd connection.

Beee-uuuuu-tea

Bob WB0POQ

3397. Re: regen frontend loading problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-07 18:17:01 UTC
From: Bob Liesenfeld <robert.liesenfeld@neicoltech.org>
Message-ID: <3CD81A1D.7CEBAEB6@neicoltech.org>
Source record: 44338

4q wrote:

> I recently built a transistor regen radio for the broadcast band. I use a
> MPF102 as the regen and I'm using a simple 100uH coil with 4 links for the
> anntena input and 6 links for the tickler. It works but I just happen to be
> about 5 blocks from KBRK which is one of the last of the big 50,000 watt am
> stations. They sit at 1420kHz but when I attach my anntena they cover from
> 800kHz to over 1600kHz. Oviously they are overloading the frontend. Is there
> anything I can do to limit the overload?
>
> Rick Haub KC0GIX

Less antenna? Perhaps a larger coil ~300uH and less C (higher Q tank) and looser coupling from the antenna.

Bob WB0POQ

3398. Re: regen frontend loading problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-07 19:35:09 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <l1bgdu09th92qr4ep6p2sha4rp99vo4snh@4ax.com>
Source record: 44339

>
> Less antenna? Perhaps a larger coil ~300uH and less C (higher Q tank) and
>looser coupling from the antenna.
>
>Bob WB0POQ

Maybe combined with a 1420 KHz notch filter?

Jack K8ZOA

>

3399. Re: regen frontend loading problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-07 20:30:21 UTC
From: 4q <nospam@nospam-tek.com>
Message-ID: <ab9dde02q8r@enews1.newsguy.com>
Source record: 44340

"Jack Smith" <jsmith@mnsinc.com> wrote in message
news:l1bgdu09th92qr4ep6p2sha4rp99vo4snh@4ax.com...
>
> >
> > Less antenna? Perhaps a larger coil ~300uH and less C (higher Q tank)
and
> >looser coupling from the antenna.
> >
> >Bob WB0POQ
>
> Maybe combined with a 1420 KHz notch filter?
>
> Jack K8ZOA
>
Hi Jack,

I thought of that but I'm trying to keep the design as simple as possible.
But I have not ruled a notch filter out, something like an am band trap but
sharply tuned to 1420KHz.

Rick KC0GIX
>
> >
>

3400. Re: regen frontend loading problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-07 20:31:31 UTC
From: 4q <nospam@nospam-tek.com>
Message-ID: <ab9dfn02qc9@enews1.newsguy.com>
Source record: 44341

"Bob Liesenfeld" <robert.liesenfeld@neicoltech.org> wrote in message
news:3CD81A1D.7CEBAEB6@neicoltech.org...
>
>
> 4q wrote:
>
> > I recently built a transistor regen radio for the broadcast band. I use
a
> > MPF102 as the regen and I'm using a simple 100uH coil with 4 links for
the
> > anntena input and 6 links for the tickler. It works but I just happen to
be
> > about 5 blocks from KBRK which is one of the last of the big 50,000 watt
am
> > stations. They sit at 1420kHz but when I attach my anntena they cover
from
> > 800kHz to over 1600kHz. Oviously they are overloading the frontend. Is
there
> > anything I can do to limit the overload?
> >
> > Rick Haub KC0GIX
>
> Less antenna? Perhaps a larger coil ~300uH and less C (higher Q tank)
and
> looser coupling from the antenna.
>

Maybe two links on the antenna side? I can try it tonight.

Rick KC0GIX

> Bob WB0POQ
>
>

3401. Re: Question about large variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-08 01:47:09 UTC
From: mcalhoun@ksu.edu
Message-ID: <aba02t$5vl@unix1.cc.ksu.edu>
Source record: 44342

>Hey, I got this very large variable cap out of a ham transmitter, I've never
>actually seen one this big in person, it was out of a 10 meter ham
>transmitter....

I find it VERY hard to believe that a variable capacitor from a
TEN meter (28 MHz) transmitter would (could?) be very big at all!

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

3402. Tuning dial / reduction drive mechanism

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-08 08:27:36 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <abanho$gra61$1@ID-61331.news.dfncis.de>
Source record: 44344
Cross-posted to: sci.electronics.components,rec.radio.amateur.homebrew

I had an enquiry about where to obtain the type of dial with reduction drive mechanism which I have used in my valve regen (http://www.hanssummers.com/radio/valve/intro.htm), transistor regen (http://www.hanssummers.com/radio/transistor/intro.htm) and my current polyphase-method SSB receiver (photos at the bottom of http://www.hanssummers.com/radio/cwtx/index.htm).

Here is a page with some photos of it from various angles: http://www.hanssummers.com/radio/polyphase/pix.htm.

Since I inherited these dials from my late Father I have no idea where to buy or obtain them. Does anyone recognise these drives and know a source?

Also, the mechanism of the dial in my current receiver project is filled with dust and grime and has a horrible backlash. Can anyone suggest how best to clean and regrease the bearings?

72's and 73's

Hans Summers, G0UPL
http://www.HansSummers.Com

3403. Re: Scale software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-08 13:31:27 UTC
From: brokebob@aol.com
Message-ID: <20020508093127.20790.00007288@mb-mw.aol.com>
Source record: 44345

Just finished touring the referenced web site and found no references to dial.exe or panel.exe. Where else should I look for those two?

brokebob@aol.com (broke=not working, retired=not working, retired=broke)

3404. Re: Wanted: AMP for 72 Mhz.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-08 14:06:34 UTC
From: Val <val_a20@hotmail.com>
Message-ID: <3CD930EA.5B1D2547@hotmail.com>
Source record: 44346

Have a look at
http://www.70mhz.org/equip.htm
for some sources...

To all US. amateurs:
70MHz (4 mtrs) *IS* an amateur band in some european countries
(UK, EIRE, Ex-Yugoslavia) and in South Africa!

73 de V.

Ziggy wrote:
>
> Anyone know of the where and how of how to get an amplifier for 72Mhz? 1watt
> in - 3-4 watts out.
>
> Thanks

3405. Re: Scale software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-08 14:07:35 UTC
From: Mike Allenson <mike@allenson.fsnet.co.uk>
Message-ID: <abbbos$ob1$1@news8.svr.pol.co.uk>
Source record: 44247

Very sorry - either it moved or I got it wrong. It is now here:
www.hfradio.org/wb8rcr/ Click the page "Panel (not QSL maker)"

73 Mike G3TGD

"Brokebob" <brokebob@aol.com> wrote in message
news:20020508093127.20790.00007288@mb-mw.aol.com...
> Just finished touring the referenced web site and found no references to
> dial.exe or panel.exe. Where else should I look for those two?
>
> brokebob@aol.com (broke=not working, retired=not working, retired=broke)

3406. FA: WW II Transmitter Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-08 15:45:39 UTC
From: zoxx@my-deja.com
Message-ID: <abbh73$m5p$1@news.netmar.com>
Source record: 44248
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.audio.tubes

Currently on eBay - several lots of WW II vintage transmitter tubes. Great for hamfest sales, experimenting, or projects:

(22) 837/VT-101 transmitting pentodes - used in the ART-13 & other military xmttrs. New in boxes, no reserve:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1350483539

(4) Eimac 15E triodes - used in many WW II aircraft radar transmitters and jammers. New in boxes, low reserve:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1351115488

(4) Eimac 15R rectifier tubes - also utilized in radar xmttrs & jammers. New in boxes, no reserve:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1351111067

..Thanks for looking

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http://newsone.net/ -- Free reading and anonymous posting to 60,000+ groups
NewsOne.Net prohibits users from posting spam. If this or other posts
made through NewsOne.Net violate posting guidelines, email abuse@newsone.net

3407. Re: Scale software was dial software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-08 17:13:11 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3CD95B4C.DF48F57D@gte.net>
Source record: 44249

Mike Allenson wrote:

> Very sorry - either it moved or I got it wrong. It is now here:
> www.hfradio.org/wb8rcr/ Click the page "Panel (not QSL maker)"
>
> 73 Mike G3TGD
>

Hi Mike,

Any sites for making new meter scales? My CAD program will do it but it is very laborious.

3408. Re: Question about large variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-08 18:39:03 UTC
From: Mercurus <azoth@37.com>
Message-ID: <bheC8.8117$km2.268564@news1.east.cox.net>
Source record: 44250

It has two 833a tubes connected with it, if you don't believe me, I posted to find help for this not to try to be discredited, Barker and Williamson was no help, and they even manufactured it.=/
"Myron A Calhoun" <mcalhoun@ksu.edu> wrote in message news:aba02t$5vl@unix1.cc.ksu.edu...
> >Hey, I got this very large variable cap out of a ham transmitter, I've never
> >actually seen one this big in person, it was out of a 10 meter ham
> >transmitter....
>
> I find it VERY hard to believe that a variable capacitor from a
> TEN meter (28 MHz) transmitter would (could?) be very big at all!
>
> --Myron.
> --
> Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
> PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
> NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

3409. Re: Tuning dial / reduction drive mechanism

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-08 22:37:03 UTC
From: Trevor Day <Trev@secornwall.com>
Message-ID: <nJUG3YGPia28Ewcp@southwestuk.demon.co.uk>
Source record: 44251

In message <abanc2$g965r$2@ID-61331.news.dfncis.de>, Hans Summers
<Hans.Summers@Tudor.Com> writes
>
>I had an enquiry about where to obtain the type of dial with reduction drive
>mechanism which I have used in my valve regen
>(http://www.hanssummers.com/radio/valve/intro.htm), transistor regen
>(http://www.hanssummers.com/radio/transistor/intro.htm) and my current
>polyphase-method SSB receiver (photos at the bottom of
>http://www.hanssummers.com/radio/cwtx/index.htm).
>
>Here is a page with some photos of it from various angles:
>http://www.hanssummers.com/radio/polyphase/pix.htm.
>
>Since I inherited these dials from my late Father I have no idea where to
>buy or obtain them. Does anyone recognise these drives and know a source?

The reduction gearing appears to be a standard Jackson Brothers 6:1 slow
motion drive. Not too sure about the dial itself but it looks
reminiscent of one I used to have fitted to a Geloso VFO.

Trev G3ZYY

--
Trevor Day

3410. Re: Wanted: AMP for 72 Mhz.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-08 23:13:27 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <EkiC8.2427$xb4.402424@news6-win.server.ntlworld.com>
Source record: 44252

> To all US. amateurs:
> 70MHz (4 mtrs) *IS* an amateur band in some european countries
> (UK, EIRE, Ex-Yugoslavia) and in South Africa!
> 73 de V.
>
> >Ziggy wrote:
> > Anyone know of the where and how of how to get an amplifier for 72Mhz?
1watt
> > in - 3-4 watts out.
========
The 4 mtrs band in the UK is from 70.000 to 70.500 mHz NOT 72 MHz.

Frank gm0csz.kn6wh@ntlworld.com

3411. Re: 28volt 50 ampere power supply electrical diagram I need

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 00:36:46 UTC
From: k7itm@aol.com
Message-ID: <3200347.0205081636.64991596@posting.google.com>
Source record: 44253

You may have a hard time finding something with enough information to homebrew your supply, unless you are willing to do some work yourself on the design. That is, you _may_ find a schematic for a 1.5kW switching supply that will run from 220V/240V input, but likely it won't be 28V output. If you have enough understanding of how the supplies work and what the problems are building something with so much power, perhaps you can look at the web sites of the companies that make switch-mode power supply controllers. The application notes often will lead you through a design, and give you a sample circuit. Of course, it is a lot of power, so be careful. Instability in such a high-power system can lead to some large voltages, or large currents, or both. If you have never built a switching supply before, it may be a good idea to start with something smaller first.

Cheers,
Tom

"Bruno IK1VHX" <bruno.lusu@tin.it> wrote in message
news:<tOTB8.13027$zW3.307861@news1.tin.it>...
> I'm looking for electrical diagram to homebrew power supply 28 volt 50
> ampere type switching with or less trasformator from 220 volt line.
> This supply to drive GRC-106 and relatives power amplifier.
> Best regards to all
> 73 de IK1VHX

3412. Re: Question about large variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 00:53:02 UTC
From: darleyput13@hotmail.com
Message-ID: <abch5g$d1n$1@newsg4.svr.pol.co.uk>
Source record: 44254

I find it VERY hard to believe that a variable capacitor from a
TEN meter (28 MHz) transmitter would (could?) be very big at all!

I find it very hard to believe that in a civilised country and society
people think it necessary to keep arms and ammunition in there houses.
Where they live! Bloody hell the kids might get hold of them!

3413. Re: QRP SSB 80/20

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 00:58:06 UTC
From: darleyput13@hotmail.com
Message-ID: <abchf0$7f$1@newsg3.svr.pol.co.uk>
Source record: 44255

try looking for home brew Harry cant remember his site but it has just what you want.

3414. TOKO Coils

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 01:08:43 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3CD9CC9C.5DEADBA4@alma.demon.co.uk>
Source record: 44256

Any ideas where I can find information to identify TOKO inductors?

I have several sets of TOKO IF cans (Mainly 455kHz) with various markings on which I would be interested in identifying. Also a kind radio ham sent me some more TOKO IF cans, and I would like to identify them to see if there is a type which I currently need.

I've tried the obvious TOKO website, but I don't see any links to search any databases.

Do any suppliers have the information hidden anywhere?

I also know of www.bec.co.uk who do have some information on their web site, but only for their current product range.

E.g.

7mm - 113SN 2140 AG
10mm - KXNS K2241 HM
10mm - 154AC 7 A 6292 81281
10mm - ROS 6A 7686 79096
10mm - 5008 60HT

You would have thought with all that area to write on that the markings might in some way indicate the value of the inductors, configuration and internal cap value!

thanks...

--Gary

3415. Re: Wanted: AMP for 72 Mhz.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 01:12:42 UTC
From: Ziggy <where@there.com>
Message-ID: <e2kC8.42641$9c5.1823255@news2.west.cox.net>
Source record: 44257

But can anyone point me to where I can get one?? I would even pay someone
to make a 'mod' of something.

"Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote in message
news:EkiC8.2427$xb4.402424@news6-win.server.ntlworld.com...
>
> > To all US. amateurs:
> > 70MHz (4 mtrs) *IS* an amateur band in some european countries
> > (UK, EIRE, Ex-Yugoslavia) and in South Africa!
> > 73 de V.
> >
> > >Ziggy wrote:
> > > Anyone know of the where and how of how to get an amplifier for 72Mhz?
> 1watt
> > > in - 3-4 watts out.
> ========
> The 4 mtrs band in the UK is from 70.000 to 70.500 mHz NOT 72 MHz.
>
> Frank gm0csz.kn6wh@ntlworld.com
>
>
>

3416. IF Stage - what type of transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 01:36:56 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3CD9D33A.CB16F39C@alma.demon.co.uk>
Source record: 44258

I am currently playing with a simple 455kHz IF stage. There will be two stages with IF cans yellow->white->black. I've found a few designs in old magazines (there's not much on the www) and I am curious as to why there are so many variations.

Which type of NPN transistor would be recommended for this task. I suspect that any old NPN will do, even BC109 or 2N2222. The designs I have to hand show: BF195; BC109; and BF185 (the can has an extra pin and can be grounded).

Any recommendations?

Other variations: output of IF can is used directly, or capacitively coupled; stage has no emitter resistor, or value 470 to 1k, sometimes capacitively decoupled. Now I know that the gain will vary...

thanks...

--Gary

3417. Re: Question about large variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 03:58:35 UTC
From: rcnixon@mindspring.com
Message-ID: <3cd9f27f.1308556@news.mindspring.com>
Source record: 44259

<darleyput13@hotmail.com> wrote:

>I find it VERY hard to believe that a variable capacitor from a
>TEN meter (28 MHz) transmitter would (could?) be very big at all!
>
>I find it very hard to believe that in a civilised country and society
>people think it necessary to keep arms and ammunition in there houses.
>Where they live! Bloody hell the kids might get hold of them!
>
>
I find it hard to believe that in a civilized country and society
people cannot defend their lives and the lives of their loved ones by
whatever means without risking legal penalties nor display the flag of
their nation on their homes without government permission. What does
the previous reply have to do with home brew radios.

In order to put some actual electronics content in this, I just last
week finished the Small Wonders Lab PSK-20 kit. I'm using a dipole on
the ceiling of my apartment and it's a blast at three watts. Great
kit, I recommend it.

Russ
"Two-fifteen, no ambulance needed!"
Subtract all nines to reply

3418. Re: QRP SSB 80/20

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 06:50:32 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0205082250.7ea0895d@posting.google.com>
Source record: 44260

Hi,
> try looking for home brew Harry

it is http://pmp3.net/harry/ (best seen from U.S.) or
http://w1.859.telia.com/~u85920178/ (best seen from EU). The
corresponding messageboard is http://pmp3.net/harry/forum/ - post any
questions or comments there. Extremely good pages !

73 de Ivan

3419. Re: QRP SSB 80/20

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 07:04:11 UTC
From: PIII-933 <no-name@no-name.no>
Message-ID: <MPG.1743db6892e2f418989685@news.mindspring.com>
Source record: 44261

In article <abchf0$7f$1@newsg3.svr.pol.co.uk>, darleyput13@hotmail.com says...
> try looking for home brew Harry cant remember his site but it has just what
> you want.
>
>
>

http://hem.passagen.se/sm0vpo/index.htm

3420. Re: First HB receiver, synchronous detection??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 07:48:01 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <RQpC8.13289$6T5.1221291@bgtnsc05-news.ops.worldnet.att.net>
Source record: 44262

I've got a dual conversion that I have used over the past few years that uses a Phillips TDA1572 as the 2nd I.F. subsystem. This device has on-board AGC and demodulation, and a buffered 50 Ohm I.F. output for feeding SSB detectors, etc. I would be glad to e-mail .gifs of the circuit details.

Pete KE9OA

Jack Smith <jsmith@mnsinc.com> wrote in message news:gikvcu85qdj9atol8e9m2gfana6gmj94ei@4ax.com...
> John said
> >But I'm thinking of detection now. Is it worth my while trying to implement
> >a simple-ish synchronous detector? Ive heard that this method is well worth
> >the extra effort. Also, Ive read that basically, a tuned limiting amp is
> >used to re-create the carrier, but with detection happening at IF, isnt it
> >just a matter of mixing a carrier at the IF frequency? i.e in my case mixing
> >a carrier of 455khz with a second double balanced mixer to resolve the
> >audio?
> >
> Curiously enough, I've been working on a similar project for a few
> weeks, but double conversion. Right now, I've got the AF amplifier,
> detector, AGC amp and one 455 KHz IF stage built and working, so I've
> got a long way to go.
>
> I decided to start with a simple 455 KHz envelope detector, with the
> plan to build in a modular fashion so that I could add synchronous
> detector after the rest of the receiver is working.
>
> After trying three different envelope detectors, I found the best
> performance, in terms of THD, with what Walter Jung's Op Amp Cookbook
> describes as a "semi-precision rectifier" using a TL074 quad op amp
> and 1N270 rectifiers. I also take a feed off this detector for my AGC
> bus. I measured the THD as 0.6% with this circuit, for a 1000 Hz
> modulating tone at 95% modulation. That's the limit of my signal
> generator, so the detector may actually be better.
>
> The circuit is shown in recent ARRL handbooks, Figure 17.31 in the
> 2000 edition shows it used purely as an AGC detector. Searching
> around the internet for "precision rectifier op amp," I found the
> underlying circuit in many places, such as Figure 8.3 in
> newton.ex.ac.uk/teaching/CDHW/Electronics2/PHY2003-08.pdf
>

> I first used 1N914 silicon diodes, as usually recommended, and found
> that I couldn't get the distortion below 3% or so. Switched to
> germanium 1N270 diodes and saw the THD drop to around 0.6%.
>
> If you are interested, I'll e-mail you a copy of the schematic. Drop
> me an e-mail if you want it.
>
> Jack K8ZOA

3421. Re: Scale software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 07:56:23 UTC
From: Don Vosper <don@vosperd.freeserve.co.uk>
Message-ID: <abda0pesl1@newsg3.svr.pol.co.uk>
Source record: 44263

"Mike Allenson" <mike@allenson.fsnet.co.uk> wrote in message
news:ab8vfbljf1@newsg1.svr.pol.co.uk...
> Don
>
> I use dial.exe and panel.exe from www.qsl.net/wb8rcr, to print front
panels
>
Thanks for the info, I found it eventually. I had one other reply giving the
following.
http://www.wmeadow.demon.co.uk/scales/scales.htm

Both do the job in a slightly different way.

Thanks all who replied.

Don M5AKY

3422. Philips OM806U PLL chip

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 10:24:16 UTC
From: Gert Kristensen <apburnie@southcom.com.au>
Message-ID: <1104_1020939856@gert>
Source record: 44264

Is there ny tech that would have the pin out for this and perhaps point me towards spechseet
(I have tried Philips but failed to get information, obsolete?)
Thanks
Gert

3423. 38special construction manual and schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 11:30:55 UTC
From: w.harbourjr@worldnet.att.net
Message-ID: <deafe3d9.0205090330.5af6e5e6@posting.google.com>
Source record: 44265

Does anyone have a copy of the 38special construction manual and schematic? I've looked at what's on the NORCAL site but that schematic is in error because it doesn't contain the 3904 driver transistor to the 74HC240. If you have a scanned copy of both that would be great.

Tnx,

Bill
KD4PWB

3424. Re: TOKO Coils

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 11:59:12 UTC
From: jrobmills@aol.comRX320
Message-ID: <20020509075912.22934.00006655@mb-cn.aol.com>
Source record: 44266

Will this web page help?

www.tokoam.com/passives/index.asp

RM~

3425. METER SCALE SOFTWARE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 12:36:28 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3CDA6BE5.B1AA09A8@gte.net>
Source record: 44267

Anyone have a URL for a software package designed for making new meter scales. I can use my DesignCAD 2D- but it is laborious.

Thanks,
Dale W4OP

3426. Re: METER SCALE SOFTWARE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 13:24:10 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <_LuC8.4924$Po6.568@rwcrnsc52.ops.asp.att.net>
Source record: 44268

"Dale Parfitt" <parinc@gte.net> wrote in message
news:3CDA6BE5.B1AA09A8@gte.net...
> Anyone have a URL for a software package designed for making new meter
> scales. I can use my DesignCAD 2D- but it is laborious.

Go to the WB6BLD website

W4ZCB

3427. Re: QRP SSB 80/20

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 13:52:46 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0205090552.7d95eded@posting.google.com>
Source record: 44269

PIII-933 <no-name@no-name.no> wrote in message
news:<MPG.1743db6892e2f418989685@news.mindspring.com>...
> http://hem.passagen.se/sm0vpo/index.htm

oh NOOOO, the URL has changed a few months ago, this one is obsolete
and is not updated any more ! See my previous message for the correct
URLs.

BR from Ivan

3428. Re: IF Stage - what type of transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 14:08:12 UTC
From: 4q <nospam@nospam-tek.com>
Message-ID: <abdvp601ver@enews2.newsguy.com>
Source record: 44271

"Gary Morton" <gary@alma.demon.co.uk> wrote in message
news:3CD9D33A.CB16F39C@alma.demon.co.uk...
> I am currently playing with a simple 455kHz IF stage. There will be two
> stages with IF cans yellow->white->black. I've found a few designs in
> old magazines (there's not much on the www) and I am curious as to why
> there are so many variations.
>
> Which type of NPN transistor would be recommended for this task. I
> suspect that any old NPN will do, even BC109 or 2N2222.

* Especialy * the 2N2222. I've been doing some work with a BC to 10m simple
superhet and I've been trying a number of NPN transisters and so far the
2N2222 has been the best overall. I use it in both the RF section and the
IF section.

Rick KC0GIX

The designs I
> have to hand show: BF195; BC109; and BF185 (the can has an extra pin and
> can be grounded).
>
> Any recommendations?
>
> Other variations: output of IF can is used directly, or capacitively
> coupled; stage has no emitter resistor, or value 470 to 1k, sometimes
> capacitively decoupled. Now I know that the gain will vary...
>
> thanks...
>
> --Gary

3429. Re: METER SCALE SOFTWARE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 14:21:31 UTC
From: Don Vosper <don@vosperd.freeserve.co.uk>
Message-ID: <abe0is$2s$1@newsg1.svr.pol.co.uk>
Source record: 44270

"Dale Parfitt" <parinc@gte.net> wrote in message
news:3CDA6BE5.B1AA09A8@gte.net...
> Anyone have a URL for a software package designed for making new meter
> scales. I can use my DesignCAD 2D- but it is laborious.
>
> Thanks,
> Dale W4OP

Have a look at the replies I got on my enquiry on the 7/05
Don

3430. Re: IF Stage - what type of transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 14:49:15 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3CDA8D4A.46871E4B@ay.com.au>
Source record: 44272

4q wrote:

> * Especialy * the 2N2222. I've been doing some work with a BC to 10m simple
> superhet and I've been trying a number of NPN transisters and so far the
> 2N2222 has been the best overall. I use it in both the RF section and the
> IF section.

I've always found the 2N3563 to be excellent in IF strips. It is
overkill for a 455kHz IF amp though. The 2SC710 is also a good choice.

--
Alan Yates
http://www.vk2zay.net/

3431. Re: TOKO Coils

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 14:52:33 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3CDA8DB3.805224A1@alma.demon.co.uk>
Source record: 44273

J Rob wrote:
>
> Will this web page help?
>
> www.tokoam.com/passives/index.asp
>
> RM~

Thanks for the pointer. This is the current TOKO product range. The parts I have are older, but impossible to say how much older.

regards...

--Gary

3432. FA: 'Vacuum Tube Amps' book, MIT Lab

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 16:11:00 UTC
From: TW@my-deja.com
Message-ID: <abe72k$kq7$1@news.netmar.com>
Source record: 44274
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

For Auction -

'Vacuum Tube Amplifiers' Book, MIT Lab Series:

Vol. 18; 'Vacuum Tube Amplifiers' - edited by G. E. Valley and Henry Wallman;
one of the most desirable volumes from the MIT Radiation Laboratory Series.
THE authoritative work on vacuum tube technology:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1535822059

..Thanks for looking.

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http://newsone.net/ -- Free reading and anonymous posting to 60,000+ groups
NewsOne.Net prohibits users from posting spam. If this or other posts
made through NewsOne.Net violate posting guidelines, email abuse@newsone.net

3433. Ham project, Maryland area

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 16:27:09 UTC
From: vshah101@aol.com
Message-ID: <20020509122709.16868.00007915@mb-fx.aol.com>
Source record: 44275

Hello, Vipul Shah, KB1HMW here. I might be taking summer courses in Maryland (if I get accepted). Any Hams interested in doing a summer design project or design study in the rf area? Perhaps towards Amateur Radio certification? I currently am in Massachusetts.

3434. Re: 7 mhz qrp amp 'brick' needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 17:36:08 UTC
From: David <pdr14@comcast.net>
Message-ID: <csyC8.71020$M7.6845450@bin7.nnrp.aus1.giganews.com>
Source record: 44276

Ramsey electronics made a cheep kit a few years ago that's exactly what
you're looking for.
It used 2 common TIP30 transistors as finals, If you can't find the kit you
may want to search for schematics and build from scratch, the design was
very simple. I think it took 2W drive for 30W out.

David
KG2LI

3435. Re: wireless serial link (possibly off-topic)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 19:00:27 UTC
From: Joe Bento <joseph@kirtland.com>
Message-ID: <abeh0d$hpmd5$1@ID-144276.news.dfncis.de>
Source record: 44277

> the functionality would definatly work, and with proper antennas, I

> might even get the distance (although no line of sight might cause

> problems at those frequencies?)...

I don't think distance will be a problem. I access the internet via a
Wireless LAN at 2.9ghz. These wireless cards typically have a range of about
200 feet used on an indoor network, but fed to a small parabolic, I access
my provider at over 3 miles away with a Virtual T1 connection. The wireless
cards typically sell for under $100 at your local office supply store.

Line of site is a potential problem. The installation people had to raise
the parabolic an additional 10 feet to clear a neighbor's rooftop several
doors away from me.

While 2.9ghz is a part 15 band and does not require any license for
operation, it sure seems to open a lot of possibilities for experimentation.

Joe, N6DGY

"Torfi" <torfitorf@yahoo.com> wrote in message
news:3ccd2031$0$138$9b622d9e@news.freenet.de...
> "atec77(nospam)" <"atec77(nospam)"@(remove)hotmail.com> schrieb im
> Newsbeitrag news:3ccd199b$0$15149$afc38c87@news.optusnet.com.au...
> or you could consider a suitable wireless wan card ?
>
> the functionality would definatly work, and with proper antennas, I might
> even get the distance (although no line of sight might cause problems at
> those frequencies?)...
>
> ...but it's just too expensive.... I'm afraid someone might go and steal
the
> equipment from my garden and would like to minimize potential costs of
> rebuilding...
>
> ...also, the power-usage is too high... I have no powerline in the garden
> and will have to run off (rechargable) batteries.
>
> I have programmed my little microprocessor system to go to sleep mode for
5
> minutes, then wake up and send the information and go back to sleep,
> allowing the set-up to potentially run for weeks without a fresh
> battery...(depends on the ammount of current drawn by the moisture sensors
> and then of course by the radio...)
>

>
>
> Torfi wrote:
> >
> > Hello!
> >
> > I�m currently tinkering with the idea of a digital remote monitor and
> > looking for input.
> > Here�s what I want to do:
> >
> > My garden is about 500 meters away from my appartment. I want to
> implement
> > a method of remotly monitoring various moisture-levels. I already built
> the
> > remote sensor using a PICmicro microprocessor, which outputs the data as
> > serial data (RS232 compliant using max232) and works fine when connected
> to
> > my laptop via cable.
> >
> > As I can�t run a 500 meter cable to my flat, I�d like to bridge the
> distance
> > using radio (no line of sight, some trees and a house in between). I�ve
> > already played around with the 433MHz remote control units from
Reynolds,
> > but they are just too weak and also too expensive to want to put in an
> > unsupervised area...
> >
> > So... I�m looking for a way to transmitt a short burst of serial data
> every
> > 5-10 minutes at around 1200baud (300 baud would be fine, too) across a
> radio
> > link about 500 meters... I would like to use a license-free band
(possible
> > RC-model frequencies or 11m?)
> >
> > Does anybody have any weblinks about how to modulate / demodulate the
> > signals, and also how to build a good and small transmitter/receiver
that
> > doesn�t interfere?
> >
> > It would be great if the transmitter/modulator could fit inside an
> > altoids-mints box, as that would match my sensor set-up :-)
> >
> > all comments welcome!
> >
> > greets,
> >
> > Torfi
>

>

3436. Re: IF Stage - what type of transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 20:59:30 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <SqBC8.12208$km2.530853@news1.east.cox.net>
Source record: 44278

It is important to know what kind and how you are going to apply
the AGC to the IF stages. The germanium PNP transistors used
in most consumer sets are intended to work with the detected AGC
voltage being fed back to the biasing.

Pete

"Gary Morton" <gary@alma.demon.co.uk> wrote in message
news:3CD9D33A.CB16F39C@alma.demon.co.uk...
> I am currently playing with a simple 455kHz IF stage. There will be two
> stages with IF cans yellow->white->black. I've found a few designs in
> old magazines (there's not much on the www) and I am curious as to why
> there are so many variations.
>
> Which type of NPN transistor would be recommended for this task. I
> suspect that any old NPN will do, even BC109 or 2N2222. The designs I
> have to hand show: BF195; BC109; and BF185 (the can has an extra pin and
> can be grounded).
>
> Any recommendations?
>
> Other variations: output of IF can is used directly, or capacitively
> coupled; stage has no emitter resistor, or value 470 to 1k, sometimes
> capacitively decoupled. Now I know that the gain will vary...
>
> thanks...
>
> --Gary

3437. Re: Scale software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 22:19:12 UTC
From: Jim Stockton <mstech@pdq.net>
Message-ID: <2441E12A85693BE3.857BD08DB0D48598.403868FEE877ED1F@lp.airnews.net>
Source record: 44279

Spehro Pefhany has something that might work for you.
http://www.speff.com/
Good Luck
Jim Stockton

Don Vosper wrote:
>
> Does anyone know of any software for creating circular dials and scales.
> Shareware or otherwise?
> Thanks
> Don M5AKY
> Bristol UK

3438. Re: TOKO Coils

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 22:38:23 UTC
From: la8ak.xnd@online.no
Message-ID: <3cdae7ce.768691726@news.online.no>
Source record: 44280

On Thu, 09 May 2002 14:52:33 GMT, Gary Morton <gary@alma.demon.co.uk>
wrote:

>J Rob wrote:
>>
>> Will this web page help?
>>
>> www.tokoam.com/passives/index.asp
>>
>> RM~
>
>Thanks for the pointer. This is the current TOKO product range. The
>parts I have are older, but impossible to say how much older.
>
Yes, this is the problem, and if you check few months back you will
see several more replies on this matter, but you may probably not find
any of your coils listed, I have several douzens of TOKO coils, but
not found any of mine listed. So perhaps I have to make my own list
based on measurements, hi.
Believe it was some info at SM0VPO or similar site, but they didn't
apply for many of my coils

It is also a problem to identify coils from the way they are listed in
the price-list. Amidon had a list, those catalogues may be worth a lot
today, I also have some older lists from late 70's which should be
scanned and decoded

73
LA8AK
--
remove ,xnd to reply

3439. Re: IF Stage - what type of transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 22:38:24 UTC
From: la8ak.xnd@online.no
Message-ID: <3cdaec05.769770541@news.online.no>
Source record: 44281

On Thu, 09 May 2002 14:49:15 GMT, Alan Yates <alany@ay.com.au> wrote:

>4q wrote:
>
>> * Especialy * the 2N2222. I've been doing some work with a BC to 10m simple
>> superhet and I've been trying a number of NPN transisters and so far the
>> 2N2222 has been the best overall. I use it in both the RF section and the
>> IF section.
>
> I've always found the 2N3563 to be excellent in IF strips. It is
>overkill for a 455kHz IF amp though. The 2SC710 is also a good choice.
>
In Europe we have a large range of inexpensive low feedback-
capacitance RF/IF transistors, so you don't have to choose amongst
devices which may oscillate instead of amplify. Also used 2N3563 back
in 1967, but such old devices are usually not cheap.

Some of the most used npn devices are BF115 BF167 BF173 BF184 BF196
BF197 BF198 BF199 BF224 BF240 and the pnp devices BF324 BF479 BF679

73
LA8AK
--
remove ,xnd to reply

3440. Terminating HC4066 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-09 22:38:24 UTC
From: la8ak.xnd@online.no
Message-ID: <3cdaf576.772187797@news.online.no>
Source record: 44282

Have found the 4066 mixer interesting, particularly for the low drive level, and it may simplify some of my applications. Several different applications have been found, but some points remain unclear.

Some application uses 50 ohm on the RF/IF ports, while some say 200-300 ohm or higher is better compromise based on series resistance and possible supply voltage. Is it really necessary to have any defined load at all on the output? Could it just be an LC-circuit of which impedance can vary?

Some applications have DC-termination on IF port, but I don't understand the need as long as it is properly DC-biassed on the RF port.

An interesting application is found on http://home.snafu.de/graff/sbt40.pdf it seems that the IF termination is 400 ohm for the AC component, but it is no DC-termination. The solution to avoid input transformer or link also seems to be a good idea.

73,
Jan-Martin
LA8AK
--
remove ,xnd to reply

3441. BC-348

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-10 00:03:04 UTC
From: Arthur Blumenfeld <ezrider@bestweb.net>
Message-ID: <3CDB0E37.69620878@bestweb.net>
Source record: 44283

I'd like to rebuild my BC-348. If I remember correctly there were two favorite conversions:

1: Rebuild the detector as a regegenerative detector.

2: Repace all of the vacume tubes with one or two IC's.

Anybody have a line on where i could find either article, I've lost my copies.

tnx

w2nzb

3442. Re: Terminating HC4066 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-10 01:25:24 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <3CDB20EA.1F103CF@flash.net>
Source record: 44284

Hi,
I have done rather extensive tests with both the HC4066 and the HC4053 used as a mixer. These tests include checking mixer output (IF) IMD at various impedances. Best IMD is achieved with both IC's when all ports are terminated in 50 ohms, exactly like the passive DBM requires. My particular application was for an LF to HF upconverter. I initially tried the "standard" diplexer at the mixer output, but further tests showed I could not achieve a flat IF response--the diplexer had a narrower bandpass than the 500kHz I wanted. I ended up terminating the mixer with a simple wideband one-transistor amp, with 50 ohm in/out impedances, and adjusting its gain to give an overall mixer conversion loss of 0 dB.
The mixer input was fed with a wideband ferrite trifilar transformer; the oscillator port from an HC04 oscillator output (not necessarily 50 ohms).
Performance of this upconverter is good.
Steve AA7U

J M Noeding wrote:
>
> Have found the 4066 mixer interesting, particularly for the low drive
> level, and it may simplify some of my applications. Several different
> applications have been found, but some points remain unclear.
>
> Some application uses 50 ohm on the RF/IF ports, while some say
> 200-300 ohm or higher is better compromise based on series resistance
> and possible supply voltage. Is it really necessary to have any
> defined load at all on the output? Could it just be an LC-circuit of
> which impedance can vary?
>
> Some applications have DC-termination on IF port, but I don't
> understand the need as long as it is properly DC-biassed on the RF
> port.
>
> An interesting application is found on
> http://home.snafu.de/graff/sbt40.pdf it seems that the IF termination
> is 400 ohm for the AC component, but it is no DC-termination. The
> solution to avoid input transformer or link also seems to be a good
> idea.
>
> 73,
> Jan-Martin
> LA8AK
> --

> remove ,xnd to reply

3443. Re: METER SCALE SOFTWARE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-10 01:27:29 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <3CDB2168.5B36F291@flash.net>
Source record: 44285

Any hints on the URL of that WB6BLD webpage?
Steve

"Harold E. Johnson" wrote:
>
> "Dale Parfitt" <parinc@gte.net> wrote in message
> news:3CDA6BE5.B1AA09A8@gte.net...
> > Anyone have a URL for a software package designed for making new meter
> > scales. I can use my DesignCAD 2D- but it is laborious.
>
> Go to the WB6BLD website
>
> W4ZCB

3444. Re: METER SCALE SOFTWARE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-10 02:04:06 UTC
From: wa0goz@arrl.net
Message-ID: <3CDB2A96.ADB@arrl.net>
Source record: 44286

http://www.qsl.net/wb6bld/

Steve Ratzlaff wrote:
>
> Any hints on the URL of that WB6BLD webpage?
> Steve
>
> "Harold E. Johnson" wrote:
> >
> > "Dale Parfitt" <parinc@gte.net> wrote in message
> > news:3CDA6BE5.B1AA09A8@gte.net...
> > > Anyone have a URL for a software package designed for making new meter
> > > scales. I can use my DesignCAD 2D- but it is laborious.
> >
> > Go to the WB6BLD website
> >
> > W4ZCB

3445. Re: TOKO Coils

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-10 02:23:01 UTC
From: Mark Mansfield <mmans@aeneas.net>
Message-ID: <q2HC8.380$iP1.104236@news.uswest.net>
Source record: 44289

I have a JWMiller catalog from the early 80's that had their
adjustable ceramic core parts along with the number of turns on
those cores, which is very handy if you want to wind up some for
your own projects. I have it scanned in .pdf format and will send
it to someone who has a ftp site and makes it available to others.
I also have some older Amidon catalogs that needs scanning in.
If anyone has the space on a ftp site and wants to host the files,
get with me and we'll work out the details (file size and such).
Mark

"J M Noeding" <la8ak.xnd@online.no> wrote in message
news:3cdae7ce.768691726@news.online.no...
> On Thu, 09 May 2002 14:52:33 GMT, Gary Morton <gary@alma.demon.co.uk>
> wrote:
>
> >J Rob wrote:
> >>
> >> Will this web page help?
> >>
> >> www.tokoam.com/passives/index.asp
> >>
> >> RM~
> >
> >Thanks for the pointer. This is the current TOKO product range. The
> >parts I have are older, but impossible to say how much older.
> >
> Yes, this is the problem, and if you check few months back you will
> see several more replies on this matter, but you may probably not find
> any of your coils listed, I have several douzens of TOKO coils, but
> not found any of mine listed. So perhaps I have to make my own list
> based on measurements, hi.
> Believe it was some info at SM0VPO or similar site, but they didn't
> apply for many of my coils
>
> It is also a problem to identify coils from the way they are listed in
> the price-list. Amidon had a list, those catalogues may be worth a lot
> today, I also have some older lists from late 70's which should be
> scanned and decoded
>
> 73
> LA8AK
> --
> remove ,xnd to reply

3446. Re: Terminating HC4066 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-10 02:42:08 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <3CDB32E5.EB52F15A@flash.net>
Source record: 44287

Perhaps I should add, the IC mixer was comparable to a passive DBM fed
by a +7dBm LO input, not a high-level DBM.
Steve

Steve Ratzlaff wrote:
>
> Hi,
> I have done rather extensive tests with both the HC4066 and the HC4053
> used as a mixer. These tests include checking mixer output (IF) IMD at
> various impedances. Best IMD is achieved with both IC's when all ports
> are terminated in 50 ohms, exactly like the passive DBM requires. My
> particular application was for an LF to HF upconverter. I initially
> tried the "standard" diplexer at the mixer output, but further tests
> showed I could not achieve a flat IF response--the diplexer had a
> narrower bandpass than the 500kHz I wanted. I ended up terminating the
> mixer with a simple wideband one-transistor amp, with 50 ohm in/out
> impedances, and adjusting its gain to give an overall mixer conversion
> loss of 0 dB.
> The mixer input was fed with a wideband ferrite trifilar transformer;
> the oscillator port from an HC04 oscillator output (not necessarily 50
> ohms).
> Performance of this upconverter is good.
> Steve AA7U
>
> J M Noeding wrote:
> >
> > Have found the 4066 mixer interesting, particularly for the low drive
> > level, and it may simplify some of my applications. Several different
> > applications have been found, but some points remain unclear.
> >
> > Some application uses 50 ohm on the RF/IF ports, while some say
> > 200-300 ohm or higher is better compromise based on series resistance
> > and possible supply voltage. Is it really necessary to have any
> > defined load at all on the output? Could it just be an LC-circuit of
> > which impedance can vary?
> >
> > Some applications have DC-termination on IF port, but I don't
> > understand the need as long as it is properly DC-biassed on the RF
> > port.
> >
> > An interesting application is found on
> > http://home.snafu.de/graff/sbt40.pdf it seems that the IF termination
> > is 400 ohm for the AC component, but it is no DC-termination. The
> > solution to avoid input transformer or link also seems to be a good

> > idea.
> >
> > 73,
> > Jan-Martin
> > LA8AK
> > --
> > remove ,xnd to reply

3447. FS: 6 M AM, TT 250, Coax Relay

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-10 03:08:09 UTC
From: Dan Reynolds <bcdlr@insightbb.com>
Message-ID: <tQGC8.4819$L76.436@rwcrnsc53>
Source record: 44288
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

I still have a project for sale. It is the 6 meter AM transceiver put out by the IA QRP club. I have the board, the pots, a used CB modulation transformer, the modulator chip, the crystal filter (the good one), and the coil form. Make me a decent offer.

I have a Ten-Tec model 250 power supply. It puts out 12 VDC @ 8 amps (non-regulated), and 12 VDC @ 1.5 amps (regulated). I don't know what rig it is for. It has a lot of "wear" scratches on it but seems to work fine. I don't know what it is worth. Make me a decent offer.

I have three NOS Dow Key Coaxial Relays, DK60-G2C. They are 52 ohm, rated for 1000 watts. The coil is 6060 ohm, 110 VDC(?). They have a set of DPDT auxiliary contacts. This is the internally shielded model. Make me a decent offer.

I'm a motivated seller. I have a Timewave DSP9+ that needs $60 worth of repairs. XYL is not too thrilled about getting it fixed since I paid $40 at a hamfest and it didn't work. Ouch.

3448. Re: BC-348

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-10 05:40:53 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0205092140.237bbfce@posting.google.com>
Source record: 44290

Arthur Blumenfeld <ezrider@bestweb.net> wrote in message
news:<3CDB0E37.69620878@bestweb.net>...
> I'd like to rebuild my BC-348. If I remember correctly there were two
> favorite conversions:
>
> 1: Rebuild the detector as a regegenerative detector.
>
> 2: Repace all of the vacume tubes with one or two IC's.
>
> Anybody have a line on where i could find either article, I've lost my
> copies.
>
>
> tnx
>
> w2nzb

Huh? The favorite conversion would have been to do the bare minimum
to make it functional. Not to keep the receiver "pristine" but
because it was more or less fine to begin with, and what's the
point of doing more than necessary.

I've never seen mention of making the detector regenerative.
And "replacing the tubes with 1 or 2 IC's" would never have
been popular, because by that time the receiver was pretty much
out of fashion. The popular conversions would have come shortly
after the war, when the receivers were popular and current.

Of course, plenty of people must have done all kinds of things
to those receivers, but you wouldn't call them popular.

Hank Cross, W1OOP (whatever happened to him?) did write
about solid-stating the BC348 in Ham Radio magazine, in 1969.
I think the only IC was the audio amplifier, since ICs were
still a relatively new thing in hobby circles.

Michael VE2BVW

3449. Re: BC-348

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-10 07:51:51 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CDB7C17.35CB6E@eznec.com>
Source record: 44291

A lot of the early (and for that matter more recent) conversions from hollow-state to solid state did terrible things to receiver performance, particularly intermodulation. Wes Hayward, W7ZOI had a photograph he would show at the beginning of some of his talks -- a KWM2 in a trash bin marked "Old Junk". It was one that had been modified to solid state, and it had dismal performance.

The BC-348 is something of a collector's item today, and getting to be more so all the time. By today's standards, it's not much of a receiver. If you modify it, you'll have a receiver that's still not much by today's standards (and very probably worse than before), and it won't even be interesting as a collector's item.

Roy Lewallen, W7EL

Arthur Blumenfeld wrote:
>
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> favorite conversions:
>
> 1: Rebuild the detector as a regegenerative detector.
>
> 2: Repace all of the vacume tubes with one or two IC's.
>
> Anybody have a line on where i could find either article, I've lost my
> copies.
>
> tnx
>
> w2nzb

3450. Re: Terminating HC4066 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-10 10:59:19 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3cdba7ad$0$16816@echo-01.iinet.net.au>
Source record: 44292

The on resistance of these devices according to the data sheet is about 20-30 ohms, depending on supply volts etc. They could be regarded as a resistor in the circuit consisting of source impedance/mixer/load impedance at the LO frequency. Thus their response will depend very much on load impedance. For example, using the Tayloe setup with a large capacitor as the mixer load (ie an audio low pass filter) the mixer acts like a very sharp bandpass filter. The mixer presents a relatively high impedance to the RF input at LO frequency (and harmonics thereof) and low impedance at other frequencies. It would presumably look like a switched capacitor filter (which it is) at audio.
Rod VK6KRG and I has done some experiments with the Tayloe circuit (ie 4 of these mixers switched by a quadrature commutated LO). If the 4 phases are mixed back up again to RF with a second set of quadrature mixers, the result is a filtered version of the input with a *very* sharp bandpass - -20 dB at +\- 50 KHz, regardless of LO frequency. These results could be achieved at 20 MHz. (and presumably higher with the right mixer) There were opposite sideband effects but this could presumably be improved with good circuit balance. We made no attempt to get ideal balance.
I would be interested to know if anyone has done a rigorous analysis of this circuit using a Spice package or in real life

Richard

"Steve Ratzlaff" <sratzlaf@flash.net> wrote in message news:3CDB32E5.EB52F15A@flash.net...
> Perhaps I should add, the IC mixer was comparable to a passive DBM fed
> by a +7dBm LO input, not a high-level DBM.
> Steve
>
> Steve Ratzlaff wrote:
> >
> > Hi,
> > I have done rather extensive tests with both the HC4066 and the HC4053
> > used as a mixer. These tests include checking mixer output (IF) IMD at
> > various impedances. Best IMD is achieved with both IC's when all ports
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> > tried the "standard" diplexer at the mixer output, but further tests
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> > mixer with a simple wideband one-transistor amp, with 50 ohm in/out
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> > The mixer input was fed with a wideband ferrite trifilar transformer;
> > the oscillator port from an HC04 oscillator output (not necessarily 50

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> > Steve AA7U
> >
> > J M Noeding wrote:
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> > > level, and it may simplify some of my applications. Several different
> > > applications have been found, but some points remain unclear.
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> > > 200-300 ohm or higher is better compromise based on series resistance
> > > and possible supply voltage. Is it really necessary to have any
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> > > http://home.snafu.de/graff/sbt40.pdf it seems that the IF termination
> > > is 400 ohm for the AC component, but it is no DC-termination. The
> > > solution to avoid input transformer or link also seems to be a good
> > > idea.
> > >
> > > 73,
> > > Jan-Martin
> > > LA8AK
> > > --
> > > remove ,xnd to reply

3451. Tube filament protection question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-10 13:12:42 UTC
From: Carel Mobach <Carel.Mobach@cgey.nl>
Message-ID: <1021036051.950796@sleeper.capgemini.nl>
Source record: 44293

Hi,

Building a new triode PA (grounded grid) with GS35B I got the following question:

What will happen in case the filament supply (12V with GS35B) breaks down (0 V)?

Of course no anode/grid current and corresponding output can be obtained, but is there any change of damaging the filament or tube ?
Basically, do I need to switch of anode voltage ? or prevent RF drive to be applied in such a case ?

Hope someone acan give me some hints ....

Thanks in advance,

Carel

Carel Mobach, PA3BAS
E: carel.mobach@cgey.nl

3452. Question about variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-10 13:39:07 UTC
From: Mercurus <azoth@37.com>
Message-ID: <%3QC8.18661$km2.707321@news1.east.cox.net>
Source record: 44294

Hey, I got this very large variable cap out of a ham transmitter, I've never
> actually seen one this big in person, it was out of a 10 meter ham
> transmitter, The engraving says Barker and Williamson
> Type CX 49 A
> Does anyone have the tech specs on this or how much it would be worth?
> Thanks
> Azoth

3453. Re: Tuning dial / reduction drive mechanism

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-10 13:39:24 UTC
From: "Eike Lantzsch, ZP6CGE" <eikelan@gmx.net>
Message-ID: <slrnadnjc8.271.eikelan@ID-77364.user.dfncis.de>
Source record: 44295
Cross-posted to: sci.electronics.components,rec.radio.amateur.homebrew

Hans Summers wrote:
>
> I had an enquiry about where to obtain the type of dial with reduction drive
> mechanism which I have used in my valve regen
> (http://www.hanssummers.com/radio/valve/intro.htm), transistor regen
> (http://www.hanssummers.com/radio/transistor/intro.htm) and my current
> polyphase-method SSB receiver (photos at the bottom of
> http://www.hanssummers.com/radio/cwtx/index.htm).
>
> Here is a page with some photos of it from various angles:
> http://www.hanssummers.com/radio/polyphase/pix.htm.
>
> Since I inherited these dials from my late Father I have no idea where to
> buy or obtain them. Does anyone recognise these drives and know a source?
>
> Also, the mechanism of the dial in my current receiver project is filled
> with dust and grime and has a horrible backlash. Can anyone suggest how best
> to clean and regrease the bearings?
>
> 72's and 73's
>
> ------------------
> Hans Summers, G0UPL
> http://www.HansSummers.Com
>
>
>
Hi Hans

These or similar where made by Mentor, Germany AFAIK.
They have a website now http://www.mentor-components.de
Look under "Produkte", "Skalenscheiben", "Knï¿½pfe",
"Untersetzungsgetriebe".
Of course the kind of combination dial/gear isn't made anymore but
you might find a replacement for the gear. They have
Art.Nr. 100.2N 6:1; Art.Nr. 100.5 10:1 and Art.Nr. 110.1 36:1
Also nice knobs with integrated gear for 6:1
I couldn't see any english pages on their site and also
their webpage is badly broken. It only works with IE. No Netscape,
no Mozilla, no Konqueror and no Opera :-((
I hate this!

Best Regards, Ike

3454. Help with Gould sweep generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-10 16:51:42 UTC
From: Mark Mansfield <mmans@aeneas.net>
Message-ID: <PMTC8.18$B93.49590@news.uswest.net>
Source record: 44197
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I'm in desperate need of a service manual for a Gould Advance sweep
generator, model SW100.
I've searched the web over, found one guy in Europe that had one for sale,
but was searching
for a manual as well.
If anyone has ideas where I might find one, I'd be very grateful (and
indebted to you for life).

Thanks!
Mark

3455. Re: Tube filament protection question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-10 17:43:52 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <sFTC8.130858$n7.11746976@bin8.nnrp.aus1.giganews.com>
Source record: 44296

When the tube is cold, you can't really harm it. I wouldn't worry about the situation you describe.

Of course, if you lose filament power while the other voltages are applied, and the filament cools off, there may be some danger at that time, a cooling filament with considerable plate current.

3456. Re: Tube filament protection question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-10 18:20:19 UTC
From: gaschafer@attbi.com
Message-ID: <3cdc100d.11565883@netnews.attbi.com>
Source record: 44198

Most all high power tubes can be damaged if plate voltage is applied
before the cathode comes
up to operating temperature. Not familiar with the tube that you
mentioned but if it is an
indirectly heated cathode type (not just a filament) then there is
usually a warm-up time of 60 to
90 seconds or more required before any other voltages are applied.

If it is a directly heated type (just a filament) then usually
filament and plate voltage can be
supplied at the same time as the tubes heats up almost instantly.

Look at the specs on the tube. They will tell you how much warm up
time is needed.

Smaller tubes that operate with plate voltages under 1000 volts can
usually have plate voltages
supplied with the cathode cold and no harm is done.

73
Gary K4FMX

On Fri, 10 May 2002 15:12:42 +0200, "Carel Mobach"
<Carel.Mobach@cgey.nl> wrote:

>Hi,
>
>Building a new triode PA (grounded grid) with GS35B I got the following
>question:
>
>What will happen in case the filament supply (12V with GS35B) breaks down (0
>V)?
>
>Of course no anode/grid current and corresponding output can be obtained,
>but is there any change of damaging the filament or tube ?
>Basically, do I need to switch of anode voltage ? or prevent RF drive to be
>applied in such a case ?
>
>Hope someone acan give me some hints ....
>
>Thanks in advance,
>
>Carel
>
>Carel Mobach, PA3BAS
>E: carel.mobach@cgey.nl

>
>
>
>

3457. Re: BC-348

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-10 22:01:47 UTC
From: Tony Angerame <tangeram@lucent.com>
Message-ID: <abhfmn$1u6@nntpb.cb.lucent.com>
Source record: 44199

Modify? Nawwwh just pair it up with an arc-5 or two a pair of Trimms and a J-38 and play airplane! These Boatanchors were in the B-17's! Man you just can't put a price on history. Remember real cw op's don't need "Selectivity". Their ears do that for them. Can you imagine operating one of these things when half the German Air Force was shooting at ya?

Tony

3458. Web site for modifications?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-10 22:44:22 UTC
From: Ziggy <where@there.com>
Message-ID: <a3YC8.49523$9c5.2219152@news2.west.cox.net>
Source record: 44200

I'm looking to modify an amplifier's frequency range and was wondering if there is a web site that is devoted to mods. I also would not mind paying someone to do the work for me.

Email Address:
bobstr27@cox.net

3459. re: WTB B&W 852 Tank circuit unit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-10 23:10:37 UTC
From: Sam <aa8wl@comcast.net>
Message-ID: <NrYC8.144833$N8.11963403@bin5.nnrp.aus1.giganews.com>
Source record: 44201

Looking for a B&W 852 tank circuit for a project. TNX DE AA8WL Sam

3460. Re: Tube filament protection question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-10 23:13:00 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <3cdc5335$1_1@newsa.ev1.net>
Source record: 44202

Without the heater, the cathode emission with drop to 0, so the tube goes
"dead".
I would not worry about it much. It would be better to use a "latching
relay" in the AC primary, so if the AC main drops out, the amp shuts down,
and no damge can be done.
I have seen amps that were severly damaged when the user was transmitting,
when the AC main dropped out and came back a few milli-seconds later.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Carel Mobach" <Carel.Mobach@cgey.nl> wrote in message
news:1021036051.950796@sleeper.capgemini.nl...
> Hi,
>
> Building a new triode PA (grounded grid) with GS35B I got the following
> question:
>
> What will happen in case the filament supply (12V with GS35B) breaks down
(0
> V)?
>
> Of course no anode/grid current and corresponding output can be obtained,
> but is there any change of damaging the filament or tube ?
> Basically, do I need to switch of anode voltage ? or prevent RF drive to
be
> applied in such a case ?
>
> Hope someone acan give me some hints ....
>
> Thanks in advance,
>
> Carel
>
> Carel Mobach, PA3BAS
> E: carel.mobach@cgey.nl
>
>
>
>

3461. Re: Question about large variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-10 23:22:42 UTC
From: mcalhoun@ksu.edu
Message-ID: <abhko2$72g@unix1.cc.ksu.edu>
Source record: 44203

>>>Hey, I got this very large variable cap out of a ham transmitter, I've
>>>never actually seen one this big in person, it was out of a 10 meter ham
>>>transmitter....

>>I find it VERY hard to believe that a variable capacitor from a
>>TEN meter (28 MHz) transmitter would (could?) be very big at all!

>It has two 833a tubes connected with it, if you don't believe me, I posted
>to find help for this not to try to be discredited, Barker and Williamson
>was no help, and they even manufactured it.

I had no intention of discrediting you. I thought you asked for help in identifying a "very large" variable capacitor, and I just tried to indicate (apparently poorly) that a capacitor used in a 10-meter xmtr might not be all that large.

Now that you've given the additional information that the xmtr has two 833A's, a tube manual shows that their maximum frequency for full rated is 30 MHz, so 10 meters is at least a possibility. The manual also shows typical plate voltages of 2000 (telegraphy) and 2500 (telephony), so capacitor spacing would need to be considerable (maybe a quarter-inch between a pair of adjacent stator plates?). But capacitances of 50-100 pf fall right in the center of what might be used at 28 MHz, and variable capacitors of that size and spacing are not what I'd consider to be "very large". (There's always the chance, however, that what **I** think of as "very large" and what you think of as "very large" are entirely different beasts!-)

So no "put down" was intended.

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

3462. Re: Web site for modifications?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-10 23:53:50 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <udond88tl6dj63@corp.supernews.com>
Source record: 44204

Are you aware that the FCC requires external power amplifiers be certified, and that as part of that certification, it is necessary to prove that:

- The amplifier cannot reasonably be modified to be capable of operation between 24 and 35 MHz
- The amplifier must require at least 50 watts of drive.

If you want to take a commercial amateur amplifier and modify it for operation at 27 MHz it's going to be tough slugging. Not only do you have the frequency problem, but you have the drive problem, too.

If you want to modify a 20 meter amp to work on 30 meters, it should be pretty simple. In fact, if you are licensed to operate on 30 meters you already know how. Going up in frequency more than a little can be a problem if it's a solid state amp. Transistor gain decreases with increasing frequency, so a single band amp may take more than some simple modification.

..

"Ziggy" <where@there.com> wrote in message news:a3YC8.49523$9c5.2219152@news2.west.cox.net...
> I'm looking to modify an amplifier's frequency range and was wondering if
> there is a web site that is devoted to mods. I also would not mind paying
> someone to do the work for me.
>
> Email Address:
> bobstr27@cox.net
>
>
>

3463. Preselector with image notch??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 00:41:17 UTC
From: John <john@clavin.freeserve.co.uk>
Message-ID: <abhpth$ek1$1@newsg1.svr.pol.co.uk>
Source record: 44205

Hi Guys,

In persuit of good image rejection in a HF receiver with a 455Khz IF, I am using a 3 stage preselector. What I have in mind to enhance this is a stage of image "notch" filtering just after the RF amp and before the first mixer. I'll use a second cap on the VFO to a tuned circuit (tuned 900Khz off) routing the image to ground.

Can anyone see any problems with this? ..apart from the fact that I would benefit from using a much higher IF!

Cheers,

John, G0WPA.

3464. Re: Terminating HC4066 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 01:16:09 UTC
From: la8ak.xnd@online.no
Message-ID: <3cdc6e88.868733163@news.online.no>
Source record: 44206

On Fri, 10 May 2002 01:25:24 GMT, Steve Ratzlaff <sratzlaf@flash.net>
wrote:

>Hi,
>I have done rather extensive tests with both the HC4066 and the HC4053
>used as a mixer. These tests include checking mixer output (IF) IMD at
>various impedances. Best IMD is achieved with both IC's when all ports
>are terminated in 50 ohms, exactly like the passive DBM requires. My
>particular application was for an LF to HF upconverter. I initially
>tried the "standard" diplexer at the mixer output, but further tests
>showed I could not achieve a flat IF response--the diplexer had a
>narrower bandpass than the 500kHz I wanted. I ended up terminating the
>mixer with a simple wideband one-transistor amp, with 50 ohm in/out
>impedances, and adjusting its gain to give an overall mixer conversion
>loss of 0 dB.
>The mixer input was fed with a wideband ferrite trifilar transformer;
>the oscillator port from an HC04 oscillator output (not necessarily 50
>ohms).
>Performance of this upconverter is good.
>Perhaps I should add, the IC mixer was comparable to a passive DBM fed
>by a +7dBm LO input, not a high-level DBM.
>Steve AA7U
>
thanks for the reply.
Want to use Philips or Motorola HC4066 on 12V supply. The maximum
signal level is 4.28V RMS. Using 200 ohm impedance the power level is
max 92mW or +19.6dBm, 6dB higher with 50 ohm RF/IF termination, and
still 16.6dBm with 400 ohm terminations.

My idea is to use a grounded gate amplifier with MPF105 or BF245B.
In the application as mixer from 136kHz to 60kHz I don't really see
that such amplifier could cause termination problems provided the
mixer sees 200 ohm for all mixer products, HF and VHF would be
different.

Understood that you ended up without diplexer and the 50 ohm amplifier
is capacitively coupled to the mixer output(?). How important is
DC-return from mixer output?

wonder if somebody has tried 2/3 4053 instead of 4/4 4066?

73, Jan-Martin LA8AK
--
remove ,xnd to reply

3465. Cutting Edge Technology from Your Own Home !

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 03:02:45 UTC
From: Eugene <AEONS2C@concentric.net>
Message-ID: <abi1kl$841@dispatch.concentric.net>
Source record: 44207

Hi
At the present time, I'm offering a look into the inner workings of an integrated circuit. Are you interested? And that's not all, for just $2.98 you can download the specifications for a 1MHz wide-band AM Radio Receiver.

You can even add-on a directional antenna ! ! !

Sincerely
Mr Ronald E Paul

--
www.aeonsciltd.net

3466. Re: Terminating HC4066 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 03:17:13 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <3CDC8D36.E6382731@flash.net>
Source record: 44208

Hi,
My experiments were with 5 and 6volts, VCC on the IC; I didn't try 12volts. Performance was somewhat improved (better IMD) with 6 volts, so I would assume significantly better at 12VCC. That is a huge max input signal you're expecting. A high-level DBM (+23dBM LO) would be straining to stay linear with such a large input. I would guess this IC mixer will not be linear with such a large input, but perhaps your application is not as a receiving mixer but as a transmitting mixer, where strict linearity may not need to be as desirable.
The following IF amp has to be capacitively coupled, in order not to short out the transistor's bias.
The IC mixer must also see a DC return on the mixer output. It's biassed at 1/2 VCC. I used 10kohm to the mixer output, for isolation, as the following IF amp provides the 50 ohm termination for the mixer.
(The complete circuit can be seen in the article in April 2002 QST magazine.)
My experiments used both the HC4066 and 4053, with identical results.
Steve

J M Noeding wrote:
>
> On Fri, 10 May 2002 01:25:24 GMT, Steve Ratzlaff <sratzlaf@flash.net>
> wrote:
>
> >Hi,
> >I have done rather extensive tests with both the HC4066 and the HC4053
> >used as a mixer. These tests include checking mixer output (IF) IMD at
> >various impedances. Best IMD is achieved with both IC's when all ports
> >are terminated in 50 ohms, exactly like the passive DBM requires. My
> >particular application was for an LF to HF upconverter. I initially
> >tried the "standard" diplexer at the mixer output, but further tests
> >showed I could not achieve a flat IF response--the diplexer had a
> >narrower bandpass than the 500kHz I wanted. I ended up terminating the
> >mixer with a simple wideband one-transistor amp, with 50 ohm in/out
> >impedances, and adjusting its gain to give an overall mixer conversion
> >loss of 0 dB.
> >The mixer input was fed with a wideband ferrite trifilar transformer;
> >the oscillator port from an HC04 oscillator output (not necessarily 50
> >ohms).
> >Performance of this upconverter is good.
> >Perhaps I should add, the IC mixer was comparable to a passive DBM fed
> >by a +7dBm LO input, not a high-level DBM.
> >Steve AA7U
> >

> thanks for the reply.
> Want to use Philips or Motorola HC4066 on 12V supply. The maximum
> signal level is 4.28V RMS. Using 200 ohm impedance the power level is
> max 92mW or +19.6dBm, 6dB higher with 50 ohm RF/IF termination, and
> still 16.6dBm with 400 ohm terminations.
>
> My idea is to use a grounded gate amplifier with MPF105 or BF245B.
> In the application as mixer from 136kHz to 60kHz I don't really see
> that such amplifier could cause termination problems provided the
> mixer sees 200 ohm for all mixer products, HF and VHF would be
> different.
>
> Understood that you ended up without diplexer and the 50 ohm amplifier
> is capacitively coupled to the mixer output(?). How important is
> DC-return from mixer output?
>
> wonder if somebody has tried 2/3 4053 instead of 4/4 4066?
>
> 73, Jan-Martin LA8AK
> --
> remove ,xnd to reply

3467. Re: Preselector with image notch??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 03:25:44 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <Lb0D8.8992$3M6.285208680@news.inreach.com>
Source record: 44210

John:

The concept is valid but I see some difficulty if the "second cap on the VFO" means you want the image reject notch to track 900 kHz away from the desired freq as you tune the VFO. It is certainly not impossible to produce such tracking, but it will not be a trivial task either. There may be some resources to assist you in this, but I am not aware of any...perhaps someone else will offer something helpful.

If you are committed to a 455 kHz IF, you might consider a dual conversion scheme to improve image rejection.

Roger K6XQ

3468. Re: BC-348

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 03:25:45 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0205101925.538081f2@posting.google.com>
Source record: 44209

"Tony Angerame" <tangeram@lucent.com> wrote in message
news:<abhfmn$1u6@nntpb.cb.lucent.com>...
> Modify? Nawwwh just pair it up with an arc-5 or two a pair of Trimms and
> a J-38 and play airplane! These Boatanchors were in the B-17's! Man you just
> can't put a price on history. Remember real cw op's don't need
> "Selectivity". Their ears do that for them. Can you imagine operating one of
> these things when half the German Air Force was shooting at ya?
>
> Tony

Was it broad? Unless I'm confusing it with something else, it had a
915KHz IF, but single-crystal filter (and I've read that the crystal
didn't age well), so could it have been that bad?

On the other hand, good design should be whether the unit fits
the application, not whether it fits a fixed set of spces. A broader
IF probably wasn't too serious, because it was channelized operation,
rather than the free-for-all of a ham band. And a broader IF would
mean it would take longer for the signal to drift out of the pass-band.

This reminds me of those six and two meter transceivers that were
described in Communications Quarterly some years back, was it Rick
Littlefield or Peter Bertini? They were basically an update of those
old AM rigs of the Gonset Communicator era. It still needed a broad
IF, because like it's predecessors the local oscillator was just
a tuneable oscillator. But it used an FM-bandwidth crystal filter,
allowing for a higher IF (and better image rejection) without the
wider passband that would occur if only IF transformers were used.
And it probably had better skirt selectivity. "A piece of junk"
if compared to a modern SSB transceiver, yet the design served
it's purpose, a relatively simple circuit that was well balanced
between trade-offs and performance.

Michael VE2BVW

3469. Re: Web site for modifications?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 05:17:31 UTC
From: Ziggy <where@there.com>
Message-ID: <LP1D8.51292$9c5.2302698@news2.west.cox.net>
Source record: 44211

I know that some of the Ramsey amplifiers can be modified to operate on
different frequencies. I just don't know where to get the information. Can
you help?

Also, I'm not operating in the USA so American law has no bearing.

Is there an ET out there?? I'm willing to pay.

"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:udond88tl6dj63@corp.supernews.com...
> Are you aware that the FCC requires external power amplifiers be
certified,
> and that as part of that certification, it is necessary to prove that:
>
> - The amplifier cannot reasonably be modified to be capable of operation
> between 24 and 35 MHz
> - The amplifier must require at least 50 watts of drive.
>
> If you want to take a commercial amateur amplifier and modify it for
> operation at 27 MHz it's going to be tough slugging. Not only do you have
> the frequency problem, but you have the drive problem, too.
>
> If you want to modify a 20 meter amp to work on 30 meters, it should be
> pretty simple. In fact, if you are licensed to operate on 30 meters you
> already know how. Going up in frequency more than a little can be a
problem
> if it's a solid state amp. Transistor gain decreases with increasing
> frequency, so a single band amp may take more than some simple
modification.
>
> ..
>
> "Ziggy" <where@there.com> wrote in message
> news:a3YC8.49523$9c5.2219152@news2.west.cox.net...
> > I'm looking to modify an amplifier's frequency range and was wondering
if
> > there is a web site that is devoted to mods. I also would not mind
paying
> > someone to do the work for me.
> >
> > Email Address:
> > bobstr27@cox.net
> >
> >
> >

>
>

3470. Re: Preselector with image notch??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 06:10:54 UTC
From: "Sverre Holm (LA3ZA)" <la3za@qsl.net>
Message-ID: <OB2D8.13286$2E.468193@news2.ulv.nextra.no>
Source record: 44212

There is an old trick used in high performance receivers in the past with a low IF. The following description is on the Tandberg Huldra 4 (about 1950) and could easily be applied to amateur bands. The Huldra 4 is a receiver with 11 bands, of which 8 are band spread short-wave bands. Its intermediate frequency is 455 kHz and the image frequency is below the desired frequency. It feeds the RF signal to a parallel tuned circuit via a series capacitor. Since the parallel tuned circuit will be inductive at the image frequency, the series combination can be made to resonate at the image and suppress it. This is implemented with 1% or 0.5 pF tolerance series capacitors and works on the 7 lowest short-wave bands, from 49 m to 13 m. On 11 m, the resonance is not sharp enough, so it is not used. In this way the receiver has variable traps for suppression of the image, with tuning that tracks the signal frequency.
See also my Tandberg page at www.qsl.net/la3za

Sverre Holm
LA3ZA

"John" <john@clavin.freeserve.co.uk> wrote in message
news:abhpth$ek1$1@newsg1.svr.pol.co.uk...
> Hi Guys,
>
> In persuit of good image rejection in a HF receiver with a 455Khz IF, I am
> using a 3 stage preselector. What I have in mind to enhance this is a
stage
> of image "notch" filtering just after the RF amp and before the first
mixer.
> I'll use a second cap on the VFO to a tuned circuit (tuned 900Khz off)
> routing the image to ground.
>
> Can anyone see any problems with this? ..apart from the fact that I would
> benefit from using a much higher IF!
>
> Cheers,
>
> John, G0WPA.
>
>

3471. VHF notch filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 06:27:34 UTC
From: Ash <abuse@microsoft.com>
Message-ID: <3CDCB9D6.936148D3@microsoft.com>
Source record: 44213
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Hey,
I need to build a notch filter for one of my antennas since I live
less than 1km from a powerful paging transmitter on 168-170MHz.
I want to put the filter in the same box as the amplifier so I cant use
a stub filter.
I was thinking about etching a microstrip filter but I have no idea
of how to calculate this, or do you have any other suggestions for
a suitable filter? Any working ideas are welcome :)

//Greg

3472. PING: Gollywog

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 09:31:23 UTC
From: maxpowa <maxpowa@iwontellsorry.com>
Message-ID: <Lx5D8.69476$Ze.10756@afrodite.telenet-ops.be>
Source record: 44214

Hey, any news from Dan's yet ?

please contact me at

webmaster#maxpowa.telenet.be

change # into @ (or my inbox might get flooded with spam) :)

Steven

3473. Re: VHF notch filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 10:40:52 UTC
From: Bill Turner <w7ti@dslextreme.com>
Message-ID: <dnspduc4audpa8ccfi8n4vctgip0jfj47k@4ax.com>
Source record: 44215
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Sat, 11 May 2002 06:27:34 GMT, Ash <abuse@microsoft.com> wrote:

>I want to put the filter in the same box as the amplifier so I cant use
>a stub filter.

_____

Why not? If we're talking about a 1/4 wl piece of coax, open at one
end, it can be coiled up pretty tight in the box and still work just
fine. Or did you mean something else?

In any event, a series- or parallel-resonant trap can be inserted in the
appropriate location and should work fine too, and be easier to tune to
the exact frequency.

Be thankful the transmitter is a km away and not next door. :-)

Bill, W7TI

3474. Re: Preselector with image notch??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 12:11:58 UTC
From: la8ak.xnd@online.no
Message-ID: <3cdcd5ad.895142078@news.online.no>
Source record: 44216

Hei

har du jobbet p&#65533; Tandberg Radio? Har pr&#65533;vd &#65533; f&#65533; tatt opp med NRHF at en burde f&#65533; noen fra de gamle radiofabrikkene til &#65533; fortelle om forskjellige triks de har gjort i produksjonen for &#65533; f&#65533; utstyr til &#65533; virke.

Til det blir en m&#65533;tt med det noks&#65533; negative holdningen - at det ikke finnes noen &#65533; sp&#65533;rre - og en kan undre seg hvorfor en slik forening ikke har innsett at det ville v&#65533;re mange ting som var interessant &#65533; finne ut av. En annen ting er hvorfor Radionette Kurer med D'96-serien har positiv tilbakekopling i f&#65533;rste MF trinn, det st&#65533;r ikke p&#65533; skjema, en form for fast innstillt Q-multiplier.

jan-martin
LA8AK

--
remove ,xnd to reply

3475. Re: Preselector with image notch??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 12:18:02 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <8t2qdusmhain48e5mdqdd4bv0qebsefum8@4ax.com>
Source record: 44217

At the price of considerable added complexity, how about an image rejecting mixer? You should pick up as much as 30 dB image rejection, dependent upon phase balances.

Jack K8ZOA

On Sat, 11 May 2002 01:41:17 +0100, "John" <john@clavin.freeserve.co.uk> wrote:

>Hi Guys,
>
>In persuit of good image rejection in a HF receiver with a 455Khz IF, I am
>using a 3 stage preselector. What I have in mind to enhance this is a stage
>of image "notch" filtering just after the RF amp and before the first mixer.
>I'll use a second cap on the VFO to a tuned circuit (tuned 900Khz off)
>routing the image to ground.
>
>Can anyone see any problems with this? ..apart from the fact that I would
>benefit from using a much higher IF!
>
>Cheers,
>
>John, G0WPA.
>

3476. Re: VHF notch filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 12:43:06 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3CDD1078.3FE9B359@gte.net>
Source record: 44218
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Ash wrote:

> Hey,
> I need to build a notch filter for one of my antennas since I live
> less than 1km from a powerful paging transmitter on 168-170MHz.
> I want to put the filter in the same box as the amplifier so I cant use
> a stub filter.
> I was thinking about etching a microstrip filter but I have no idea
> of how to calculate this, or do you have any other suggestions for
> a suitable filter? Any working ideas are welcome :)
>
> //Greg

The problem with stubs is that they are broad and not very deep (even w/
hardline)
See our asymmetrical notch filters at http://parelectronics.com or the
Universal Radio, Grove Enterprises or AES site. Very steep and deep
notches.
Dale W4OP
for PAR Electronics, Inc.

3477. Re: VHF notch filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 13:23:52 UTC
From: budgie <budgie@nowhere.cantech.net.au>
Message-ID: <3cdd1ab2.3333430@news.cantech.net.au>
Source record: 44219
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Sat, 11 May 2002 06:27:34 GMT, Ash <abuse@microsoft.com> wrote:

>Hey,
>I need to build a notch filter for one of my antennas since I live
>less than 1km from a powerful paging transmitter on 168-170MHz.
>I want to put the filter in the same box as the amplifier so I cant use
>a stub filter.

Before you rule out any filtering approach, you really need to
determine how much rejection you need.

Use a sniffer and measure the rejection required with an attenuator in
the ant line to your Rx, with a sig-gen into the tap of the sniffer.

>I was thinking about etching a microstrip filter but I have no idea
>of how to calculate this, or do you have any other suggestions for
>a suitable filter? Any working ideas are welcome :)

usually a small helical resonator will give quite a decent rejection.

3478. Re: VHF notch filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 17:01:15 UTC
From: Ken Wolfe <k3qv@hotmail.com>
Message-ID: <udqjjiiv77ma4c@corp.supernews.com>
Source record: 44220
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I live 300 meters from a paging/whatever tower, I use the PAR inline notch filters, www.parelectronics.com.
They have worked flawlessy and are transparent to the 70 cm side of my rig.

Good Luck
Ken K3QV

"Ash" <abuse@microsoft.com> wrote in message news:3CDCB9D6.936148D3@microsoft.com...
> Hey,
> I need to build a notch filter for one of my antennas since I live
> less than 1km from a powerful paging transmitter on 168-170MHz.
> I want to put the filter in the same box as the amplifier so I cant use
> a stub filter.
> I was thinking about etching a microstrip filter but I have no idea
> of how to calculate this, or do you have any other suggestions for
> a suitable filter? Any working ideas are welcome :)
>
> //Greg
>

3479. Homebrew general coverage receiver - how I did it.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 17:49:27 UTC
From: gapershi@aol.common
Message-ID: <20020511134927.08611.00008255@mb-cp.aol.com>
Source record: 44221

Hi,

Maybe you have seen my site before but I will post it here again because
I have just completed a major redisign of the web site.
It gives a detailed description of my homebrew receiver 0.3 - 30 MHz.
Also I have added the technical description of the audio processing board
which was long overdue.

members.aol.com/gapershi/radio.htm

I hope other homebrewers can document their projects in a similar manner.
Oh, and before yo ask, no I am not a ham.

Gary
+++ You can lead a fool to reason, but you can't make him think! +++
<Gapershi>

3480. where TEA5757 spider protoboard ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 19:06:18 UTC
From: Jim Davis <jim.davis51@verizon.net>
Message-ID: <3CDD6BC1.4DA09878@verizon.net>
Source record: 44222

Anyone know where to get a protoboard ,

with a surface mounted Philips TEA5757 ,
already soldered in the middle ,
like a spider ?

3481. Re: Web site for modifications?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 19:37:19 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <udqsodeonk6q72@corp.supernews.com>
Source record: 44223

"Ziggy" <where@there.com> wrote in message
news:LP1D8.51292$9c5.2302698@news2.west.cox.net...
> I know that some of the Ramsey amplifiers can be modified to operate on
> different frequencies. I just don't know where to get the information. Can
> you help?

I think the Ramsey amp is relatively broadband. In any event, as long as you are not going too far in frequency, all you really need to do is to recalculate the output network for the new frequency. There are about a zillion programs out there to do this.

It's hard to understand how Ramsey gets away with selling their amp, however, on other reflectors it does seem like this amp takes quite a bit to get it operating on the frequencies it was intended for. Plus, it's not a lot of power so charlie probably looks the other way.

> Also, I'm not operating in the USA so American law has no bearing.

Well, whether you are operating under US law or not, most of the reasonably priced amps are marketed to U.S. hams, so they are built to comply with the FCC regs so they can sell them here.

> Is there an ET out there?? I'm willing to pay.

Amplifiers are relatively simple. If you were to get a copy of The ARRL Handbook you would find projects for a half-dozen amps along with enough information to build one on the frequency you want.

Also, at www.hfprojects.org is enough information to build a pretty nice amp. You won't be able to get in on their parts buy, but there is a bunch of information on that site. Plus, there's not a huge amount of theoretical info there, so you would have to make some assumptions on changing the frequency.

What are you trying to do? If you are looking for relatively low power like the Ramsey amp, it can be a pretty simple thing. But as the power goes up, and as the frequency goes up, it gets harder. Although at some VHF ranges there are amp components that can be assembled into an amp with relatively little pain, again, depending on the power level.

..

3482. Re: Tuning dial / reduction drive mechanism

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 21:31:23 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <L4gD8.10668$L76.942@rwcrnsc53>
Source record: 44224
Cross-posted to: sci.electronics.components,rec.radio.amateur.homebrew

Hans,

Many old ARRL Handbook projects used these dials in the 1950's. I believe
that Millen and National both made versions. I occasionally see on eBay and
at Hamfests (Rallys - UK).

w9gb

"Hans Summers" <Hans.Summers@Tudor.Com> wrote in message
news:abanho$gra61$1@ID-61331.news.dfncis.de...
>
> I had an enquiry about where to obtain the type of dial with reduction
drive
> mechanism which I have used in my valve regen
> (http://www.hanssummers.com/radio/valve/intro.htm), transistor regen
> (http://www.hanssummers.com/radio/transistor/intro.htm) and my current
> polyphase-method SSB receiver (photos at the bottom of
> http://www.hanssummers.com/radio/cwtx/index.htm).
>
> Here is a page with some photos of it from various angles:
> http://www.hanssummers.com/radio/polyphase/pix.htm.
>
> Since I inherited these dials from my late Father I have no idea where to
> buy or obtain them. Does anyone recognise these drives and know a source?
>
> Also, the mechanism of the dial in my current receiver project is filled
> with dust and grime and has a horrible backlash. Can anyone suggest how
best
> to clean and regrease the bearings?
>
> 72's and 73's
>
> ------------------
> Hans Summers, G0UPL
> http://www.HansSummers.Com
>
>
>

3483. HP3586 Sel Lvl Meter as Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 21:44:56 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <shgD8.147997$n7.13368657@bin8.nnrp.aus1.giganews.com>
Source record: 44225

Tunes from audio to 32MHz, ultrastable crystal oven, filters for 20, 400 and 3100 Hz, Upper and Lower Sideband. Has anyone seriously considered using one as a a receiver back end?

3484. Low bandwidth Video for a robot

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 22:24:59 UTC
From: Matt <nospammatthewredfearn@hotmail.com>
Message-ID: <uSgD8.19762$xb4.3461192@news6-win.server.ntlworld.com>
Source record: 44226

I am building an underwater robot for a university project and i want to put a video camera on board. I want about 1 frame per second. What radio frequencies can be transmitted underwater and recieved either above the surface or with an aerial under? At these frequencies would the availiable bandwidth cope with a low res (300x300 pixel sampled at 8 bit resolution - meaning a total size of 720kbit) image at this kind of refresh rate? Can a transmitter/reciever pair for this be bought, or built, for a reasonable price? If so please could you point me in the right direction? Any help would be greatly appreciated.

Thanks in advance

Matt

3485. Re: HP3586 Sel Lvl Meter as Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 23:14:33 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3CDDA5D8.2F710184@nettally.com>
Source record: 44227

I have one -a 3586B, almost brand new! I even changed the tuning knob to a spinner to facilitate faster tuning. It is a great receiver, accurate and sensitive, a great VLF receiver, but it has some disadvantages:

1. Limited memory storage, limited in capacity and retention time. Be sure to replace the NICAD battery ($30 from agilent) before it leaks on the Power supply card.

2. There is no form of AGC, This is test equipment, the circuitry is designed to accurately measure input signal levels but apparently has no control over the audio gain. Work arounds are to turn off the autoleveling feature or to set the receiver to "average". I am looking into a simple add on AVC circuit to tap into the audio output amplifier. The output power of the amp is a bit low, and the speaker small.

3. There is no squelch circuit.

4. Tuning steps must be programmed in from front panel, the tuning is a bit slow and clunky but gets you to where you need to go.

There are three different versions an A, B and C. The catalog describes them. I think the C has fewer test features. The A and B differ in that the B has "C" message filtering. The input assembly uses funky video connectors and is 75ohm on the A and B models. I removed the unbalanced input connector on mine and replaced with a BNC, With some washers, I was able to shim the BNC connector to project out the front bezel same as the factory installed version on the C model.

I am interested in hearing from others using these.

john walton wrote:

> Tunes from audio to 32MHz, ultrastable crystal oven, filters for 20, 400 and
> 3100 Hz, Upper and Lower Sideband. Has anyone seriously considered using
> one as a a receiver back end?

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

3486. Re: Preselector with image notch??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-11 23:16:26 UTC
From: John <john@clavin.freeserve.co.uk>
Message-ID: <abk9aiuji1@newsg3.svr.pol.co.uk>
Source record: 44228

Thanks for the replies guys,

What I had in mind Roger was to align the tuned circuit at the top end of the RX range where the 910Khz image may otherwise be a problem. If the tracking was less accurate at the lower end it should not be a problem as the tighter filtering of the pre-select would probably have removed most of the image anyway. My main concern with using a dual gang cap was inadvertantly coupling some VFO signal to the mixers RF input.

What Sverre Holm suggested also sounds interesting. Im presuming that the series cap would need to be variable, because no matter what the received frequency, the perceived value of inductance would be a fixed value at the image freq(i.e the inductance would be a result of the 910Khz difference between the wanted and image freqs). This needs some experimentation I think.

As for using an image rejection mixer?, well i've thought that it must be possible using mixers or Q-multipliers and i'll certainly do some searches for info on them. 30dB of image rejection would be total at HF where noise levels are high anyway so that sounds like a definite possibility but the concept of phase balances is just a little scary :)

Thanks again guys,

John G0WPA, G-Qrp Club 8760.

"Roger Leone" <arleone@inreach.com> wrote in message
news:Lb0D8.8992$3M6.285208680@news.inreach.com...
> John:
>
> The concept is valid but I see some difficulty if the "second cap on the
> VFO" means you want the image reject notch to track 900 kHz away from the
> desired freq as you tune the VFO. It is certainly not impossible to
> produce such tracking, but it will not be a trivial task either. There
may
> be some resources to assist you in this, but I am not aware of
any...perhaps
> someone else will offer something helpful.
>
> If you are committed to a 455 kHz IF, you might consider a dual conversion
> scheme to improve image rejection.
>
> Roger K6XQ
>
>

3487. DXERS UNLIMITED By Arnie Coro CO2KK

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-12 03:02:45 UTC
From: Radio Havana Cuba <radiohc@radiohc.org>
Message-ID: <abklvr$kg3$1@nytr.blythe.org>
Source record: 44229
Cross-posted to:
rec.radio.shortwave,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.antenna,rec.radio.amateur.equipment

RADIO HABANA CUBA
DXERS UNLIMITED

WEEKEND EDITION
SATURDAY, MAY 4, 2002

By Arnie Coro CO2KK

Send your comments, questions and ideas to: arnie@radiohc.org

Hi, amigos radioaficionados all around the world! You are now listening to the weekend edition of your favorite radio hobby program, this is Dxers Unlimited, and I am Arnie Coro, radio amateur CO2KK, your host here in Havana ready to share with you all about seventeen minutes of all radio hobby related information....

Here is item one: Another upsurge in solar activity, and heliosismic data show that there are lots of sunspots on the farside of the Sun, so amigos, we may be seeing yet another solar rotation with a lot of activity!!!

Item two: Specialized amateur contests that do not disrupt your weekend with the family and friends are becoming more and more popular, for one very good reason: you enjoy the thrills of a real contest for a few hours, and then the rest of the weekend can be spent with your family. Not too long ago, a ham radio friend told me that the four- or six-hour-long contests do require a lot of skill, especially those that let you select the four- or six-hour operating period!!!

Item three: FM band Dxing is becoming more and more difficult all over the world due to the continuos increase of the number of low power local FM broadcast stations that are receiving licenses from the radio regulating authorities. Even a 10 watt local with a 6 dB gain antenna will make DX impossible on its own channel and at least on the first two adjacent channels, that depending on how close to your location the low power FM station is.

Nevertheless, dedicated FM broadcast band Dxers are learning some of the tricks that AM band DXers use, like waiting for off-the-air hours that station engineers need to do equipment maintenance... By the way, the FM broadcast band sporadic E DX season has just started, but so far, the openings are few and far apart from each other.

Item four: Homebrewing your radios is a lot of fun, and there is nothing like listening to DX with your homebuilt receiver, or like working DX with your amateur radio rig which you have just finished building. More about homebrew radios later here at the weekend edition of DXers Unlimited, amigos...

And, as always at the end of the show, be ready to copy Arnie Coro's Dxers Unlimited's exclusive and not copyrighted HF plus 6 meters propagation update and forecast. Margarita

Delgado is my sound engineer and producer at studio 7, this is Radio Havana Cuba....

Amigos, you are listening to the weekend edition of Dxers Unlimited, and here is our main feature for today: Arnie's advice about homebrewing your radio equipment. First things first... so don't attempt to start your homebrewing with a very sophisticated project, or without having the adequate tools at hand including, of course, your digital multi-meter!

You may perhaps want to start learning how to homebrew your radios by building one of the many kits now available, and as a matter of fact, that is an approach that I do recommend, because kits are an excellent way of learning about electronics.... Unfortunately some of the new generation kits are rather difficult to assemble due to the use of very small electronic components placed too tightly together, thus making your job of putting together the kit a lot harder. Here in Cuba, radio amateurs build a lot of their equipment, and something we all have learned is to homebrew our radios without any attempts to make them miniature sets!!!

Leaving enough space between the resistors, capacitors, integrated circuits, transistors, coils, crystals and other components has proven to be a very good idea, because it is a lot easier to put them together into something that will work, and also because when there is a breakdown, your homebrew set is a lot easier to repair...

Some Cuban amateurs have a second transceiver always ready for emergency communications, and that second radio is typically a version of the JAGUEY solid state double sideband transceiver, running anywhere from 3 to 10 watts, enough to communicate using a Near Vertical Incidence Skywave antenna system on the 80 and 40 meter bands... The homebrew JAGUEY is a quite straightforward design that allows you to upgrade the transceiver to a single side band set if you are able to obtain a single side band filter at a later date...

As a good friend likes to say, when you use a low power double sideband transceiver, no one realizes that you are also transmitting the unwanted sideband, as the other station's radio provides the filtering to pick up just the sideband in use on that specific band... In other words, if I am operating CO2KK with my JAGUEY on 40 meters, other stations using Single Side Band rigs will only pick up my lower sideband, as their transceivers will just chop away the upper side band when receiving....

Well, as you may realize, homebrewing a low cost double side band transceiver is not only a perfectly feasible project, but also one that will make your station ready to deal with communications emergencies, due to the fact that the JAGUEY needs just 12 volts from a battery to operate, and it draws very little current, even when transmitting. More about the JAGUEY and its most recent improvements in a few seconds, when Dxers Unlimited's weekend edition continues...

You are listening to Radio Havana Cuba, and amigos, if you happen to own a receiver capable of receiving single side band signals, try listening to our 11705 kiloHertz SSB broadcasts in English that start at 0100 UTC and last until 0500 UTC. Again our 11705 kiloHertz SSB is operating using upper sideband at reduced carrier, so that you can zero beat to the residual carrier for perfect reception... For those technically minded, we are running around 20 kiloWatts Peak Envelope Power, or PEP, with -12 dB carrier level, and the antenna is an array of dipoles beaming exactly North of Havana...

And now more about the JAGUEY double side band and CW single amateur band transceiver and its latest version... Among the most recent upgrades are the use of a triple tuned bandpass input filter and attenuator, which makes reception a lot better... Receiver incremental tuning, or RIT, was also added to the basic JAGUEY design, and the CW keying was improved

by using a PNP transistor with wave shaping to key the rig...

Also, the NEW JAGUEY has an optional pair of audio filters, one for SSB and the other one for CW, so that the operator may switch from one to the other as required. The NEW JAGUEY also uses a simple but effective transmitter audio compressor that improves the punch of the signal quite a bit. And last but not least, some of the local enthusiasts have now built a very low-cost linear amplifier that uses recycled vacuum tubes to increase the output power of the JAGUEY to anywhere between 20 and 50 Watts...

One very interesting feature of the NEW JAGUEY is that once the newcomer to the amateur radio hobby finds a single sideband filter, the NEW JAGUEY can be readily adapted to be the "tail end" of a single sideband transceiver, so not even one component is lost from the original project. AH, and before I forget, the NEW JAGUEY is a very, very, flexible design because, for example, the receiver audio can be implemented with no less than three different circuits, a straightforward three transistor single ended audio amplifier, a more sophisticated push pull design using discrete components as the first one just mentioned, and the classic JAGUEY receiver audio module that uses a low noise audio transistor coupled to an integrated circuit audio amplifier, the TBA810 or A210 that happens to be plentiful here in Cuba...

Si amigos, yes my friends, oui mes amis... Homebrewing your radio gear is a lot of fun, and when propagation conditions are not good, then you just plug in the soldering iron, and start building your next project... By the way, I am working now on the NEW JAGUEY PROJECT circuit diagram and operating manual, and as soon as they are both ready, they will be posted at our Dxers Unlimited website for you to download....

One of the outstading features of this unique radio amateur transceiver is the fact that I have included a complete list of parts with sets of values that can be used without the circuit suffering from any degradation.... In other words, you may find right next to each component -- be it a resistor, capacitor, transistor or IC -- a number of options that you can use, making construction a lot easier... As many of you who already have built electronic equipment know very well, the lack of a specific value resistor, for example, can bring the whole project to a standstill, so is was why I spend a lot of time testing each NEW JAGUEY module to learn how the parts values could be changed around without degrading the performance of the transceiver!!!

The NEW JAGUEY receiver chain uses a switched three, four or five position RF input attenuator, followed by a two or three tuned circuit band pass filter, feeding a grounded base or grounded gate RF amplifier stage, that delivers its signal to a double balanced mixer acting as a product detector... audio from the product detector is fed to a low noise audio preamplifier that in turn feeds one of the two audio filters, which in turn feed the audio power amplifier module... The VFO is a very straightforward three transistor module, of which there are three different versions that you can choose from, depending on the parts that you have available. As a matter of fact, newcomers to the amateur radio hobby may build just the receiver part of the NEW JAGUEY and start listening to the 80 or 40 meter bands to pick up CW practice, and then after they obtain their license, they can build the transmitter module!

I'll tell you more about the NEW JAGUEY in our upcoming mid-week edition of Dxers Unlimited next Tuesday and Wednesday UTC days, when I will describe the transmitter chain of the NEW JAGUEY, the Cuban-designed, low-cost double sideband and CW transceiver....

And now, amigos, as always at the end of the show, here is Arnie Coro's Dxers Unlimited's HF plus 6 meters propagation update and forecast:

Solar activity is MOVING UP AGAIN, and both the number of sunspots and solar microwave flux are increasing... Heliosismic data show that we will have from a week to ten more days of higher activity, and don't be surprised if yet another big solar flare erupts during the next few days.

We all hope that the summer sporadic E season will finally take off, too. The best band for amateur radio Dxing during the local daylight hours should be 15 meters, while nightime DX on 20 meters is going to be plentiful for the rest of the summer...

Send your signal reports and comments to arnie@radiohc.org and VIA AIRMAIL to Arnie Coro, Radio Havana Cuba, Havana, Cuba

Prepared 04-May-2002; received by NY Transfer News 07-May-2002

Arnie Coro CO2KK
Havana, Cuba
May 4, 2002

Postal address:
Arnie Coro, "Dxers Unlimited"
Radio Havana Cuba, Havana, CUBA
e-mail: arnie@radiohc.org

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http://www.radiohc.org

3488. DXERS UNLIMITED WEEKEND EDITION By Arnie Coro CO2KK

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-12 03:04:13 UTC
From: Radio Havana Cuba <radiohc@radiohc.org>
Message-ID: <abkm2hkho1@nytr.blythe.org>
Source record: 44230
Cross-posted to:
rec.radio.shortwave,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.antenna,rec.radio.amateur.equipment

RADIO HABANA CUBA
DXERS UNLIMITED

WEEKEND EDITION
SATURDAY, APRIL 27, 2002

By Arnie Coro CO2KK

Send your comments, questions and ideas to: arnie@radiohc.org

Hi, amigos radioaficionados around the world! Nice to have you all listening to radio hobby program coming to you from Havana. I am Arnie Coro, radio amateur CO2KK, and as always it is my pleasure to share with you about seventeen minutes of all radio hobby related information!

Item one: Solar update: After a very active last week, now the sun seems to be taking a rest, and the daily sunspot numbers and solar flux have taken a nose dive. At the same time we are enjoying a period of very quiet geomagnetic activity, quite a change from the past two weeks...

Item two: One of the most fascinating ways of enjoying our wonderful hobby is .... YES, one of the most wonderful way of playing with our radios is to organize a DX expedition... go to a remote location, install your radio equipment, have yourself a nice time and make a lot of ham radio operators around the world very happy too when you give them the opportunity to work a new country, or in the case of VHF-UHF and Microwaves a new Grid Square...

Today I have here with me at RHC studio 7 an amateur radio operator from the United States, his name is Frank Smith and the world knows him for organizing some very interesting amateur radio DX expeditions...

Frank will answer my questions about this very interesting topic so that many of you will perhaps start thinking about organizing your own Dx expedition soon!!! And as always, at the end of the show, I will provide you with the most up to date HF plus 6 meters propagation forecast... Margarita Delgado is my sound engineer and producer, I am Arnie Coro in Havana back with you all in a few seconds....

You are tuned to Radio Havana Cuba, and this is Dxers Unlimited's weekend edition... today with a special interview to Frank Smith, an American radio amateur visiting Cuba... Frank, let's start talking amigo...

[The live on-air conversation is not available in this transcript. Please contact Arnie at arnie@radiohc.org for more information. -- NY Transfer]

Arnie Coro CO2KK
Havana, Cuba

April 27, 2002

Postal address:
Arnie Coro, "Dxers Unlimited"
Radio Havana Cuba, Havana, CUBA
e-mail: arnie@radiohc.org

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http://www.radiohc.org

3489. RF connectors on older EICO test gear

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-12 07:27:54 UTC
From: Jochen Roth <jochen@this.is.invalid>
Message-ID: <abl5hqfvf1@reader1.panix.com>
Source record: 44231
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hello,

I have an old (50s) EICO signal tracer and a couple other pieces of equipment from around that time, like a VTVM.

I want to find out the specification for the connectors used by most of these pieces, and perhaps a source. I'd rather keep the old connectors than replace them with newer BNC pieces.

Size is similar to PL259, but with a shorter thread, and without the prong that the PL259 type connectors use. Likewise, the jack does not have a hole. The hot connection is made by the solder ball created by soldering the cable to the connector.

Thanks in advance for any help.

Jochen

3490. CQ Orlando Wtd TT1380

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-12 10:56:57 UTC
From: Paul <paul.warman@usa.net>
Message-ID: <3cde4a3b_1@mk-nntp-1.news.uk.worldonline.com>
Source record: 44232
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

I have a ham work colleague visiting Orlando for the next 4 days and I would really appreciate it if anyone has an unbuilt TT1380 80mtr transceiver kit and would be prepared to deliver one to his hotel (he can't drive). Of course I would pay the costs.
Please let me know if you can help out.
Paul, G0odp
Paul.warman#usa.net (change # to @)

3491. Re: Low bandwidth Video for a robot

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-12 11:46:48 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <ablkn7$b99$2@knossos.btinternet.com>
Source record: 44233

"Matt" <nospammatthewredfearn@hotmail.com> wrote in message
news:uSgD8.19762$xb4.3461192@news6-win.server.ntlworld.com...
> I am building an underwater robot for a university project and i want to
put
> a video camera on board. I want about 1 frame per second. What radio
> frequencies can be transmitted underwater and recieved either above the
> surface or with an aerial under? At these frequencies would the availiable
> bandwidth cope with a low res (300x300 pixel sampled at 8 bit resolution -
> meaning a total size of 720kbit) image at this kind of refresh rate? Can a
> transmitter/reciever pair for this be bought, or built, for a reasonable
> price? If so please could you point me in the right direction? Any help
> would be greatly appreciated.

Conventional radio doesn't work under water. The military use very low
frequency signals which do propagate OK for communication with nuclear subs,
but need *very* long antennas to transmit them. You will need some other
form of transmission which can be modulated such as sound or light.

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.com
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

3492. Re: Low bandwidth Video for a robot

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-12 12:13:05 UTC
From: Michael Neverdosky <michaeln@cfl.rr.com>
Message-ID: <3CDE5C31.D57901F4@cfl.rr.com>
Source record: 44234

There has been and is now lots of work going on in this area.
Search under ROV (remote operated vehicle) and AUV (autonomous
underwater
vehicle) and you should find something interesting.

You will probably need to use an ultrasonic link if you need the robot
to be wireless. If you can use an umbilical then it is much easier as
you can get plenty of bandwidth on simple wire. The working ROVs out
there generally use fiberoptics and will have multiple channels of high
resolution
video and telemetry in addition to the power and control. When you
remember
that many of these ROVs are working to 10,000 feet or more underwater
you
can see that this is not simple junk.

You might want to check out JW Fishers;
http://www.jwfishers.com

Look also at commercial diving sites. Lots of work formerly done by
divers is
now done or supplemented by ROVs.

michael (electronics tech and commercial diver in central FL)

Leon Heller wrote:
>
> "Matt" <nospammatthewredfearn@hotmail.com> wrote in message
> news:uSgD8.19762$xb4.3461192@news6-win.server.ntlworld.com...
> > I am building an underwater robot for a university project and i want to
> put
> > a video camera on board. I want about 1 frame per second. What radio
> > frequencies can be transmitted underwater and recieved either above the
> > surface or with an aerial under? At these frequencies would the availiable
> > bandwidth cope with a low res (300x300 pixel sampled at 8 bit resolution -
> > meaning a total size of 720kbit) image at this kind of refresh rate? Can a
> > transmitter/reciever pair for this be bought, or built, for a reasonable
> > price? If so please could you point me in the right direction? Any help
> > would be greatly appreciated.
>
> Conventional radio doesn't work under water. The military use very low
> frequency signals which do propagate OK for communication with nuclear subs,
> but need *very* long antennas to transmit them. You will need some other
> form of transmission which can be modulated such as sound or light.
>
> Leon

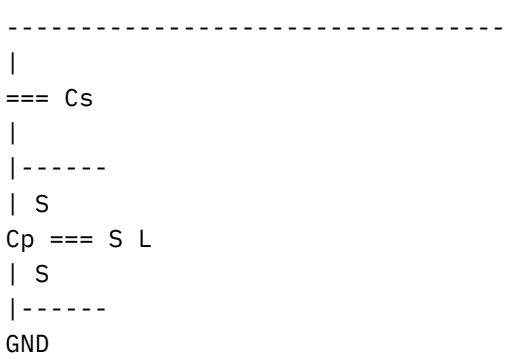
> --
> Leon Heller, G1HSM leon_heller@hotmail.com
> http://www.geocities.com/leon_heller
> Low-cost Altera Flex design kit: http://www.leonheller.com

3493. Re: Preselector with image notch??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-12 12:49:41 UTC
From: "Sverre Holm (LA3ZA)" <la3za@qsl.net>
Message-ID: <FxtD8.13500$ph2.431220@news4.ulv.nextra.no>
Source record: 44235

"John" <john@clavin.freeserve.co.uk> wrote in message
news:abk9aiuji1@newsg3.svr.pol.co.uk...
>
> What Sverre Holm suggested also sounds interesting. Im presuming that the
> series cap would need to be variable, because no matter what the received
> frequency, the perceived value of inductance would be a fixed value at the
> image freq(i.e the inductance would be a result of the 910Khz difference
> between the wanted and image freqs). This needs some experimentation I
> think.
>

No, the series cap is fixed. The input circuit is:



where the Cp is variable. The variable Cp both tunes the parallel resonance (with L) and the series resonance (combination of Cs and Cp//L). For a narrow band such as a broadcast band or an amateur band, the tracking is good enough.

Sverre
LA3ZA

3494. Farnell LFM2

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-12 13:38:52 UTC
From: UnTale <io@io.it>
Message-ID: <rhuD8.48843$US3.1101405@twister1.libero.it>
Source record: 44236

Hi,
I'm looking for FARNELL LFM2
(sine-square generator) manual, schematics etc...
can anyone help me?
thanks
--
73 de iz7ath, Talino

Homebrew, RF projects and digital tecniques on
http://www.qsl.net/iz7ath
IZ7ATH Talino +39 338 5029196

3495. Re: DXERS UNLIMITED By Arnie Coro CO2KK

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-12 14:01:26 UTC
From: irwin X <ishapiro@ispwest.REMOVETHIS.com>
Message-ID: <ablu9502i38@enews3.newsguy.com>
Source record: 44237
Cross-posted to:
rec.radio.shortwave,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.antenna,rec.radio.amateur.equipment

i wonder if i will need the special $1700 u.s. visa to visit the web site

"Radio Havana Cuba" <radiohc@radiohc.org> wrote in message
news:abklvr$kg3$1@nytr.blythe.org...
> RADIO HABANA CUBA
> DXERS UNLIMITED
>
> WEEKEND EDITION
> SATURDAY, MAY 4, 2002
>
> By Arnie Coro CO2KK
>
> Send your comments, questions and ideas to: arnie@radiohc.org
>
> Hi, amigos radioaficionados all around the world! You are now listening to
the weekend edition of your favorite radio hobby program, this is Dxers
Unlimited, and I am Arnie Coro, radio amateur CO2KK, your host here in
Havana ready to share with you all about seventeen minutes of all radio
hobby related information....
>
> Here is item one: Another upsurge in solar activity, and heliosismic data
show that there are lots of sunspots on the farside of the Sun, so amigos,
we may be seeing yet another solar rotation with a lot of activity!!!
>
> Item two: Specialized amateur contests that do not disrupt your weekend
with the family and friends are becoming more and more popular, for one very
good reason: you enjoy the thrills of a real contest for a few hours, and
then the rest of the weekend can be spent with your family. Not too long
ago, a ham radio friend told me that the four- or six-hour-long contests do
require a lot of skill, especially those that let you select the four- or
six-hour operating period!!!
>
> Item three: FM band Dxing is becoming more and more difficult all over the
world due to the continuos increase of the number of low power local FM
broadcast stations that are receiving licenses from the radio regulating
authorities. Even a 10 watt local with a 6 dB gain antenna will make DX
impossible on its own channel and at least on the first two adjacent
channels, that depending on how close to your location the low power FM
station is.
>
> Nevertheless, dedicated FM broadcast band Dxers are learning some of the
tricks that AM band DXers use, like waiting for off-the-air hours that
station engineers need to do equipment maintenance... By the way, the FM

broadcast band sporadic E DX season has just started, but so far, the openings are few and far apart from each other.
>
> Item four: Homebrewing your radios is a lot of fun, and there is nothing like listening to DX with your homebuilt receiver, or like working DX with your amateur radio rig which you have just finished building. More about homebrew radios later here at the weekend edition of DXers Unlimited, amigos...
>
> And, as always at the end of the show, be ready to copy Arnie Coro's Dxers Unlimited's exclusive and not copyrighted HF plus 6 meters propagation update and forecast. Margarita Delgado is my sound engineer and producer at studio 7, this is Radio Havana Cuba....
>
> Amigos, you are listening to the weekend edition of Dxers Unlimited, and here is our main feature for today: Arnie's advice about homebrewing your radio equipment. First things first... so don't attempt to start your homebrewing with a very sophisticated project, or without having the adequate tools at hand including, of course, your digital multi-meter!
>
> You may perhaps want to start learning how to homebrew your radios by building one of the many kits now available, and as a matter of fact, that is an approach that I do recommend, because kits are an excellent way of learning about electronics.... Unfortunately some of the new generation kits are rather difficult to assemble due to the use of very small electronic components placed too tightly together, thus making your job of putting together the kit a lot harder. Here in Cuba, radio amateurs build a lot of their equipment, and something we all have learned is to homebrew our radios without any attempts to make them miniature sets!!!
>
> Leaving enough space between the resistors, capacitors, integrated circuits, transistors, coils, crystals and other components has proven to be a very good idea, because it is a lot easier to put them together into something that will work, and also because when there is a breakdown, your homebrew set is a lot easier to repair...
>
> Some Cuban amateurs have a second transceiver always ready for emergency communications, and that second radio is typically a version of the JAGUEY solid state double sideband transceiver, running anywhere from 3 to 10 watts, enough to communicate using a Near Vertical Incidence Skywave antenna system on the 80 and 40 meter bands... The homebrew JAGUEY is a quite straightforward design that allows you to upgrade the transceiver to a single side band set if you are able to obtain a single side band filter at a later date...
>
> As a good friend likes to say, when you use a low power double sideband transceiver, no one realizes that you are also transmitting the unwanted sideband, as the other station's radio provides the filtering to pick up just the sideband in use on that specific band... In other words, if I am operating CO2KK with my JAGUEY on 40 meters, other stations using Single

Side Band rigs will only pick up my lower sideband, as their transceivers will just chop away the upper side band when receiving....
>
> Well, as you may realize, homebrewing a low cost double side band transceiver is not only a perfectly feasible project, but also one that will make your station ready to deal with communications emergencies, due to the fact that the JAGUEY needs just 12 volts from a battery to operate, and it draws very little current, even when transmitting. More about the JAGUEY and its most recent improvements in a few seconds, when Dxers Unlimited's weekend edition continues...
>
> You are listening to Radio Havana Cuba, and amigos, if you happen to own a receiver capable of receiving single side band signals, try listening to our 11705 kiloHertz SSB broadcasts in English that start at 0100 UTC and last until 0500 UTC. Again our 11705 kiloHertz SSB is operating using upper sideband at reduced carrier, so that you can zero beat to the residual carrier for perfect reception... For those technically minded, we are running around 20 kiloWatts Peak Envelope Power, or PEP, with -12 dB carrier level, and the antenna is an array of dipoles beaming exactly North of Havana...
>
> And now more about the JAGUEY double side band and CW single amateur band transceiver and its latest version... Among the most recent upgrades are the use of a triple tuned bandpass input filter and attenuator, which makes reception a lot better... Receiver incremental tuning, or RIT, was also added to the basic JAGUEY design, and the CW keying was improved by using a PNP transistor with wave shaping to key the rig...
>
> Also, the NEW JAGUEY has an optional pair of audio filters, one for SSB and the other one for CW, so that the operator may switch from one to the other as required. The NEW JAGUEY also uses a simple but effective transmitter audio compressor that improves the punch of the signal quite a bit. And last but not least, some of the local enthusiasts have now built a very low-cost linear amplifier that uses recycled vacuum tubes to increase the output power of the JAGUEY to anywhere between 20 and 50 Watts...
>
> One very interesting feature of the NEW JAGUEY is that once the newcomer to the amateur radio hobby finds a single sideband filter, the NEW JAGUEY can be readily adapted to be the "tail end" of a single sideband transceiver, so not even one component is lost from the original project. AH, and before I forget, the NEW JAGUEY is a very, very, flexible design because, for example, the receiver audio can be implemented with no less than three different circuits, a straightforward three transistor single ended audio amplifier, a more sophisticated push pull design using discrete components as the first one just mentioned, and the classic JAGUEY receiver audio module that uses a low noise audio transistor coupled to an integrated circuit audio amplifier, the TBA810 or A210 that happens to be plentiful here in Cuba...
>
> Si amigos, yes my friends, oui mes amis... Homebrewing your radio gear is

a lot of fun, and when propagation conditions are not good, then you just plug in the soldering iron, and start building your next project... By the way, I am working now on the NEW JAGUEY PROJECT circuit diagram and operating manual, and as soon as they are both ready, they will be posted at our Dxers Unlimited website for you to download....
>
> One of the outstading features of this unique radio amateur transceiver is the fact that I have included a complete list of parts with sets of values that can be used without the circuit suffering from any degradation.... In other words, you may find right next to each component -- be it a resistor, capacitor, transistor or IC -- a number of options that you can use, making construction a lot easier... As many of you who already have built electronic equipment know very well, the lack of a specific value resistor, for example, can bring the whole project to a standstill, so is was why I spend a lot of time testing each NEW JAGUEY module to learn how the parts values could be changed around without degrading the performance of the transceiver!!!
>
> The NEW JAGUEY receiver chain uses a switched three, four or five position RF input attenuator, followed by a two or three tuned circuit band pass filter, feeding a grounded base or grounded gate RF amplifier stage, that delivers its signal to a double balanced mixer acting as a product detector... audio from the product detector is fed to a low noise audio preamplifier that in turn feeds one of the two audio filters, which in turn feed the audio power amplifier module... The VFO is a very straightforward three transistor module, of which there are three different versions that you can choose from, depending on the parts that you have available. As a matter of fact, newcomers to the amateur radio hobby may build just the receiver part of the NEW JAGUEY and start listening to the 80 or 40 meter bands to pick up CW practice, and then after they obtain their license, they can build the transmitter module!
>
> I'll tell you more about the NEW JAGUEY in our upcoming mid-week edition of Dxers Unlimited next Tuesday and Wednesday UTC days, when I will describe the transmitter chain of the NEW JAGUEY, the Cuban-designed, low-cost double sideband and CW transceiver....
>
> And now, amigos, as always at the end of the show, here is Arnie Coro's Dxers Unlimited's HF plus 6 meters propagation update and forecast:
>
> Solar activity is MOVING UP AGAIN, and both the number of sunspots and solar microwave flux are increasing... Heliosismic data show that we will have from a week to ten more days of higher activity, and don't be surprised if yet another big solar flare erupts during the next few days.
>
> We all hope that the summer sporadic E season will finally take off, too. The best band for amateur radio Dxing during the local daylight hours should be 15 meters, while nightime DX on 20 meters is going to be plentiful for the rest of the summer...
>

> Send your signal reports and comments to arnie@radiohc.org and VIA AIRMAIL
to Arnie Coro, Radio Havana Cuba, Havana, Cuba
>
> Prepared 04-May-2002; received by NY Transfer News 07-May-2002
>
> Arnie Coro CO2KK
> Havana, Cuba
> May 4, 2002
>
> Postal address:
> Arnie Coro, "Dxers Unlimited"
> Radio Havana Cuba, Havana, CUBA
> e-mail: arnie@radiohc.org
>
> --
>
> http://www.radiohc.org

3496. Re: HP3586 Sel Lvl Meter as Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-12 15:31:48 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <EVvD8.144843$q8.15226428@bin3.nnrp.aus1.giganews.com>
Source record: 44238

The reason I asked, is of course, I picked one up for a c-note on EBay. It weighs a ton! I have the "A" model which is CCITT, the B model is "Bell" or US Standard, and the C model is no frills. I haven't been able to playwith it yet since I have a broken foot and getting in the workshop is a challenge. (I had one of my kids haul it down.)

Jack exWA8PZL

"Joe Leikhim" <jleikhim@nettally.com> wrote in message news:3CDDA5D8.2F710184@nettally.com...
> I have one -a 3586B, almost brand new! I even changed the tuning knob to a
> spinner to facilitate faster tuning. It is a great receiver, accurate and
> sensitive, a great VLF receiver, but it has some disadvantages:
>
> 1. Limited memory storage, limited in capacity and retention time. Be sure to
> replace the NICAD battery ($30 from agilent) before it leaks on the Power supply
> card.
>
> 2. There is no form of AGC, This is test equipment, the circuitry is designed to
> accurately measure input signal levels but apparently has no control over the
> audio gain. Work arounds are to turn off the autoleveling feature or to set the
> receiver to "average". I am looking into a simple add on AVC circuit to tap into
> the audio output amplifier. The output power of the amp is a bit low, and the
> speaker small.
>
> 3. There is no squelch circuit.
>
> 4. Tuning steps must be programmed in from front panel, the tuning is a bit slow
> and clunky but gets you to where you need to go.
>
> There are three different versions an A, B and C. The catalog describes them. I
> think the C has fewer test features. The A and B differ in that the B has "C"
> message filtering. The input assembly uses funky video connectors and is 75ohm
> on the A and B models. I removed the unbalanced input connector on mine

and
> replaced with a BNC, With some washers, I was able to shim the BNC
connector to
> project out the front bezel same as the factory installed version on the C
> model.
>
> I am interested in hearing from others using these.
>
> john walton wrote:
>
> > Tunes from audio to 32MHz, ultrastable crystal oven, filters for 20, 400
and
> > 3100 Hz, Upper and Lower Sideband. Has anyone seriously considered
using
> > one as a a receiver back end?
>
> --
> Joe Leikhim K4SAT
> Jleikhim@nettally.com
>
> "Jazz is not dead. It just smells funny." -F.Z.
>
>
>

3497. Re: Preselector with image notch??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-12 15:51:12 UTC
From: motsteve@mediaone.net
Message-ID: <motsteve-1205021154430001@c-66-176-144-91.se.client2.attbi.com>
Source record: 44239

In article <FxtD8.13500$ph2.431220@news4.ulv.nextra.no>, "Sverre Holm
\(LA3ZA\)" <la3za@qsl.net> wrote:

> "John" <john@clavin.freeserve.co.uk> wrote in message
> news:abk9aiuji1@newsg3.svr.pol.co.uk...
> >
> > What Sverre Holm suggested also sounds interesting. Im presuming that the
> > series cap would need to be variable, because no matter what the received
> > frequency, the perceived value of inductance would be a fixed value at the
> > image freq(i.e the inductance would be a result of the 910Khz difference
> > between the wanted and image freqs). This needs some experimentation I
> > think.
> >
>
> No, the series cap is fixed. The input circuit is:
>
> ----------------------------------
> |
> === Cs
> |
> |------
> | S
> Cp === S L
> | S
> |------
> GND
>
> where the Cp is variable. The variable Cp both tunes the parallel resonance
> (with L) and the series resonance (combination of Cs and Cp//L). For a
> narrow band such as a broadcast band or an amateur band, the tracking is
> good enough.
>
>
> Sverre
> LA3ZA

I don't want to rain on anyone's parade, but a transmission zero that
close to the passband is undoable even in theory with a preselector.
Anyone interested in infinite passband ripple and an infinite group
delay? A quadrature mixer approach makes more sense and it is relatively
easy to do these days with the integration levels we now have. The other
suggestion of a higher 1st IF is also a good one. IF filters at 109 MHz
or so are readily available at a reasonable cost. RF is a pain anyway.
Buy a rice box. :-)

Steve WB4CZR

3498. Re: Low bandwidth Video for a robot

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-12 16:53:16 UTC
From: 4q <nospam@nospam-tek.com>
Message-ID: <abm6it03195@enews3.newsguy.com>
Source record: 44241

I should think that it is a matter of attenuation. A good friend of mine is an insurance inspector for a company that underwrites ocean oil platforms. He has used diving gear that has built in radio transceivers. Regular VHF or UHF gear should work if you are transmitting only a few meters or so.

Rick KC0GIX

"Matt" <nospammatthewredfearn@hotmail.com> wrote in message news:uSgD8.19762$xb4.3461192@news6-win.server.ntlworld.com...
> I am building an underwater robot for a university project and i want to put
> a video camera on board. I want about 1 frame per second. What radio
> frequencies can be transmitted underwater and recieved either above the
> surface or with an aerial under? At these frequencies would the availiable
> bandwidth cope with a low res (300x300 pixel sampled at 8 bit resolution -
> meaning a total size of 720kbit) image at this kind of refresh rate? Can a
> transmitter/reciever pair for this be bought, or built, for a reasonable
> price? If so please could you point me in the right direction? Any help
> would be greatly appreciated.
>
> Thanks in advance
>
> Matt
>
>

3499. Re: Preselector with image notch??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-12 17:13:18 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CDEA2E1.530B@pop.removethistomailme.net>
Source record: 44240

carltons wrote:
>
> IF filters at 109 MHz
> or so are readily available at a reasonable cost.

Where? I needed one of those the other day. I ended up building one of Wes Hayward's 110 MHz IF filter designs from his spectrum analyzer project, but I wouldn't have minded finding a commercial part to save the trouble.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3500. Re: Low bandwidth Video for a robot

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-12 17:56:00 UTC
From: "Sverre Holm (LA3ZA)" <la3za@qsl.net>
Message-ID: <Q0yD8.13619$ph2.434961@news4.ulv.nextra.no>
Source record: 44242

The rule of thumb is that radio will penetrate about a wavelength in water,
I don't remember the attenuation then, but it is quite high.

Sverre Holm
LA3ZA

"4q" <nospam@nospam-tek.com> wrote in message
news:abm6it03195@enews3.newsguy.com...
> I should think that it is a matter of attenuation. A good friend of mine
is
> an insurance inspector for a company that underwrites ocean oil platforms.
> He has used diving gear that has built in radio transceivers. Regular VHF
or
> UHF gear should work if you are transmitting only a few meters or so.
>
> Rick KC0GIX
>
>
> "Matt" <nospammatthewredfearn@hotmail.com> wrote in message
> news:uSgD8.19762$xb4.3461192@news6-win.server.ntlworld.com...
> > I am building an underwater robot for a university project and i want to
> put
> > a video camera on board. I want about 1 frame per second. What radio
> > frequencies can be transmitted underwater and recieved either above the
> > surface or with an aerial under? At these frequencies would the
availiable
> > bandwidth cope with a low res (300x300 pixel sampled at 8 bit
resolution -
> > meaning a total size of 720kbit) image at this kind of refresh rate? Can
a
> > transmitter/reciever pair for this be bought, or built, for a reasonable
> > price? If so please could you point me in the right direction? Any help
> > would be greatly appreciated.
> >
> > Thanks in advance
> >
> > Matt
> >
> >
>
>

3501. Re: Preselector with image notch??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-12 17:56:00 UTC
From: "Sverre Holm (LA3ZA)" <la3za@qsl.net>
Message-ID: <Q0yD8.13618$ph2.434961@news4.ulv.nextra.no>
Source record: 44243

Well, it actually works and I have the receiver.

An example of component values used in the Tandberg Huldra 4 (1950-53):
For the 6.9-7.45 MHz band, Cs = 156 pF, and Cp = 270 in parallel with [Cvar in series with 200 pF]. The variable capacitor is also used to tune the medium wave and long wave inputs, so I assume something like 3-400 pF max capacitance. The coil is air-filled and uses silver leads presumably to get high Q. The fixed capcitors have been hand-tuned by grinding off small pieces for fine-tuning, also the coil's end-tap has been soldered manually in place for fine-tuning, indicating that this circuit requires high precision and small tolerances to work. It is used up to and including input frequency 22 MHz.

It shouldn't be too difficult to model in order to find the required Q for this to work with the image frequency notch 910 kHz below the signal frequency.

Sverre Holm
LA3ZA

"carltons" <motsteve@mediaone.net> wrote in message
news:motsteve-1205021154430001@c-66-176-144-91.se.client2.attbi.com...
> > No, the series cap is fixed. The input circuit is:
> >
> > ----------
> > |
> > === Cs
> > |
> > |------
> > | S
> > Cp === S L
> > | S
> > |------
> > GND
> >
> > where the Cp is variable. The variable Cp both tunes the parallel
resonance
> > (with L) and the series resonance (combination of Cs and Cp//L). For a
> > narrow band such as a broadcast band or an amateur band, the tracking is
> > good enough.
> >
> >
> > Sverre
> > LA3ZA
>

>
> I don't want to rain on anyone's parade, but a transmission zero that
> close to the passband is undoable even in theory with a preselector.

3502. Re: RF connectors on older EICO test gear

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-12 18:56:34 UTC
From: mzenier@eskimo.com
Message-ID: <abot00$13l$1@eskinews.eskimo.com>
Source record: 44160
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

In article <abl5hqfvf1@reader1.panix.com>,
Jochen Roth <jochen@this.is.invalid> wrote:
>Hello,
>
>I have an old (50s) EICO signal tracer and a couple other pieces
>of equipment from around that time, like a VTVM.
>
>I want to find out the specification for the connectors used by
>most of these pieces, and perhaps a source. I'd rather keep the
>old connectors than replace them with newer BNC pieces.
>
>Size is similar to PL259, but with a shorter thread, and without
>the prong that the PL259 type connectors use. Likewise, the jack
>does not have a hole. The hot connection is made by the solder
>ball created by soldering the cable to the connector.

That's the old "microphone" connector. Looking at some old
catalogs, my guess is the Amphenol Series 75.

Mark Zenier mzenier@eskimo.com Washington State resident

3503. Re: Low bandwidth Video for a robot

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-12 21:56:26 UTC
From: Michael Neverdosky <michaeln@cfl.rr.com>
Message-ID: <3CDEE4EA.83927D0F@cfl.rr.com>
Source record: 44245

What they call a diver radio is usually a wire intercom. Sometimes they
use
wireless but those are an ultrasonic system.
Most of the diving on the rigs is surface supplied so there is no reason
to
not add the communication link on a wire pair in the umbilical.

michael

4q wrote:
>
> I should think that it is a matter of attenuation. A good friend of mine is
> an insurance inspector for a company that underwrites ocean oil platforms.
> He has used diving gear that has built in radio transceivers. Regular VHF or
> UHF gear should work if you are transmitting only a few meters or so.

3504. OH-web-site for PMR modifications (NMT)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-12 21:58:48 UTC
From: la8ak.xnd@online.no
Message-ID: <3cdee217.1029412281@news.online.no>
Source record: 44246

Believe I found a Finnish web-site for modifications, but can't find
it again now, any help? Looking for NMT900 base station modifications,
have insvestigated into CCU92D transceiver, and some part of the
circuit is easy to draw, but I'd like to find more info

73
LA8AK
--
remove ,xnd to reply

3505. Re: OH-web-site for PMR modifications (NMT)?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-12 22:13:42 UTC
From: la8ak.xnd@online.no
Message-ID: <3cdee86c.1031033620@news.online.no>
Source record: 44147

it alsways helps to ask and then I found it
http://oh3tr.ele.tut.fi/english/modifications.html
--
remove ,xnd to reply

3506. Re: HP3586 Sel Lvl Meter as Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-12 22:50:14 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <3CDEF1A2.88371145@flash.net>
Source record: 44148

Hi,
I have the C model, with the high-stability time base. It's a superb piece of test equipment (at least the C model is). The built-in tracking generator works wonderfully well for sweeping filters, etc. The A and B model's extra features have no relevance to using the SLM as a receiver, though.
All models make OK receivers. As the other poster noted, the major "feature" you'll deal with is no agc. The frontend is completely broadband; no input filters at all. Sensitivity is poor compared to a "real" communications receiver, but with a decent outdoor antenna, is often adequate. Many folks are starting to acquire these units to use in the QRSS modes at LF. The FCC has just posted info about the possibility of a US ham band at 136kHz becoming more of a reality (the Europeans have had this band for several years now.)
The 3.1kHz filter in this SLM has a very flat passband, with steep skirts; the other filters are broad Gaussian filters--very poor shape factor, but excellent for their intended use in telecommuncations.
Given a choice, I recommend buying the C model, but any of the A,B,C versions will work fine as a receiver, given the comments of above and what others have already noted. And if you got yours for only $100., and if it is functional, then you truly got a good deal. My C model was $500, (the seller didn't know it had the when-new $1000. high-stability time base option), and was in like-new condition, with a current calibration sticker--still a good deal, to me.
Note also these SLM's are not really suited for aural listening to CW signals, as the BFO frequency is high (1.8kHz?), for its intended telecom usage. Of course you can tune in CW, but you'll have to learn to live with its high-pitched tone. I haven't explored the possibility of going inside my unit and trying to change the pitch. My unit's primary usage is as a piece of test equipment on my bench at home; it only sees rare usage as a "receiver". (I'm spoiled by having "real" receivers.)
But friends use theirs regularly for LF usage, feeding the audio output into the computer soundcard and using various QRSS programs to decode the signals. For those applications, the high pitch of the CW note doesn't matter at all.
Steve AA7U

john walton wrote:
>
> Tunes from audio to 32MHz, ultrastable crystal oven, filters for 20, 400 and
> 3100 Hz, Upper and Lower Sideband. Has anyone seriously considered using
> one as a a receiver back end?

3507. Re: DXERS UNLIMITED By Arnie Coro CO2KK

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-13 01:18:50 UTC
From: Rollo&#65533; <Rollo_member@newsguy.com>
Message-ID: <abn49q015pt@drn.newsguy.com>
Source record: 44149
Cross-posted to:
rec.radio.shortwave,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.antenna,rec.radio.amateur.equipment

In article <abklvr$kg3$1@nytr.blythe.org>, Radio says...
>
>RADIO HABANA CUBA
>
>Postal address:
>Arnie Coro, "Dxers Unlimited"
>Radio Havana Cuba, Havana, CUBA
>e-mail: arnie@radiohc.org

Hey Arnie, I sent you a reception report back in November.
You actually used one of my emails in one of your shows.

Where's my QSL card? Fidel cause a shortage of stamps or something?

3508. Re: HP3586 Sel Lvl Meter as Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-13 01:42:54 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3CDF1A1E.5589335A@nettally.com>
Source record: 44150

Steve; How are you tracking with that unit. Are you taking a source from the back panel 0-32 MHz connector? Any trick to doing this? Will it "sweep"?

Steve Ratzlaff wrote:

> Hi,
> I have the C model, with the high-stability time base. It's a superb
> piece of test equipment (at least the C model is). The built-in tracking
> generator works wonderfully well for sweeping filters, etc. The A and B
> model's extra features have no relevance to using the SLM as a receiver,
> though.
> (snip)

> john walton wrote:
> >
> > Tunes from audio to 32MHz, ultrastable crystal oven, filters for 20, 400 and
> > 3100 Hz, Upper and Lower Sideband. Has anyone seriously considered using
> > one as a a receiver back end?

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

3509. Re: HP3586 Sel Lvl Meter as Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-13 02:58:49 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <3CDF2BE7.9A236E3B@flash.net>
Source record: 44151

Hi,
Yes, the tracking generator's output is on the rear. I manually "sweep"
the device by entering each frequency.
Steve

Joe Leikhim wrote:
>
> Steve; How are you tracking with that unit. Are you taking a source from the back
> panel 0-32 MHz connector? Any trick to doing this? Will it "sweep"?
>

3510. Re: HP3586 Sel Lvl Meter as Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-13 03:12:32 UTC
From: Christer Bergstrom <christer.bergstrom@adsum.pp.se>
Message-ID: <19audu0ld4m1v38q8qtb5eg4da2qbubm2n@4ax.com>
Source record: 44152

On Sat, 11 May 2002 21:44:56 GMT, "john walton" <jdwalton@comcast.net>
wrote:

>Tunes from audio to 32MHz, ultrastable crystal oven, filters for 20, 400 and
>3100 Hz, Upper and Lower Sideband. Has anyone seriously considered using
>one as a a receiver back end?
>

It is indeed a good recevier even considering you doni¿½t have an AGC but
this is fairly easy to overcome, using the manual entry of the Full
Scale level by pressing: "ENTRY" "FULL SCALE" then using
UP arrow DOWN arrow as wanted, ended by pressing "MEAS CONT"
By offsetting wanted frequency by 1,85kHz, + or - depending of
which sideband you want to hear.
By pressing "COUNTER" you will see the received transmitters actual
frequency.
To my knowledge it is the only receiver that will play
the finale from Beethoveni¿½s 9 symphony... press:
"RECALL" "decimal point" "CNTR FREQ" "8" and wait...

best regards
Christer Bergstri¿½m
Viker
Sweden

3511. Re: HP3586 Sel Lvl Meter as Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-13 03:52:38 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3CDF3886.9A610519@nettally.com>
Source record: 44153

I forgot about the built in test bit! That alone was worth buying a service manual!

Christer Bergstrom wrote:

> On Sat, 11 May 2002 21:44:56 GMT, "john walton" <jdwalton@comcast.net>
> wrote:
>
> >Tunes from audio to 32MHz, ultrastable crystal oven, filters for 20, 400 and
> >3100 Hz, Upper and Lower Sideband. Has anyone seriously considered using
> >one as a a receiver back end?
> >
>
> It is indeed a good recevier even considering you donï¿½t have an AGC but
> this is fairly easy to overcome, using the manual entry of the Full
> Scale level by pressing: "ENTRY" "FULL SCALE" then using
> UP arrow DOWN arrow as wanted, ended by pressing "MEAS CONT"
> By offsetting wanted frequency by 1,85kHz, + or - depending of
> which sideband you want to hear.
> By pressing "COUNTER" you will see the received transmitters actual
> frequency.
> To my knowledge it is the only receiver that will play
> the finale from Beethovenï¿½s 9 symphony... press:
> "RECALL" "decimal point" "CNTR FREQ" "8" and wait...
>
> best regards
> Christer Bergstrï¿½m
> Viker
> Sweden

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

3512. Transistors for Yaesu FT-301 10W final and driver needed!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-13 03:53:49 UTC
From: Michael Pupeza <mpupeza@sympatico.ca>
Message-ID: <B904B10D.1CBF%mpupeza@sympatico.ca>
Source record: 44154
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Hi;
I'm heading to Dayton this week and want to pick up some parts.
My Yaesu FT-301 (Low power) has dropped it's output from 13-15W, down to 2-4W.
I suspect the driver (2SC1589), or 1 (or both) of the S10-12 Finals.
I doubt that the driver will be hard to find under that number, but the S10-12s may be a challenge.
What Motorola, or other Big Brand, might be a substitute?
These are the white ceramic circle with 4 fan flanges, and 2 screw hole tabs at a 45 degree angle to the flanges. A fairly common style, I believe.
Their Output Rating in SSB would probably be 15 - 20 Watts each, with a gain of 10-15 dB, I would guess, on 12V up to 30 MHz.

Any help would be appreciated.
Thanks
73
Mike VE3EQP.....>

3513. Re: Two-tone oscillator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-13 05:25:09 UTC
From: Alister Watt <alister@watt.swinternet.co.uk>
Message-ID: <3cdedda1_2@mk-nntp-1.news.uk.worldonline.com>
Source record: 44244

A much better two tone oscillator can be
made with two 4-bit shift registers and
8 selected resistors to give extremely low
distortion maybe 80dB down.
G4FQR is writing an article for RadCom
on these.
73,
Alister G3ZBU

3514. This is a posting test

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-13 08:42:38 UTC
From: gorilla <gorilla@jungle.com>
Message-ID: <3CDF7C7E.5C14F53E@jungle.com>
Source record: 44155

```
This is a test
sorry
```

3515. Re: This is a posting test

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-13 09:30:14 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3cdf8795.8415791@news.freeserve.net>
Source record: 44156

On Mon, 13 May 2002 10:42:38 +0200, gorilla <gorilla@jungle.com>
wrote:

>This is a test
>sorry
>
No you're not ;-)

3516. Power/SWR Meter Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-13 15:21:04 UTC
From: Jerry W Campbell <jerryc@peak.org>
Message-ID: <1021275484.410341@sevenofnine.peak.org>
Source record: 44157

A friend died an his wife gave me a
a bunch of radio junk. In the box I found a Heathkit HM-2102
VHF power/swr meter. There was no manual and I don't know
what the SWR Sensitivity knob is for or how to set it.
I was hoping someone here might know and could tell me in a few words.
Thank You,
Jerry KB7BKN
Summit, Oregon

3517. SWR/Power Meter Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-13 15:25:41 UTC
From: Jerry W Campbell <jerryc@peak.org>
Message-ID: <1021275657.222587@sevenofnine.peak.org>
Source record: 44158

A friend died an his wife gave me a
a bunch of radio junk. In the box I found an Heathkit HM-2102
power/swr meter. There was no manual and I don't know
what the SWR Sensitivity knob is for or how to set it.
I was hoping someone here might know and could tell me
in a few words.
Thanks
Jerry KB7BKN
Summit, Oregon

3518. Re: Power/SWR Meter Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-13 15:58:21 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3CDFE29D.8E54C21A@mfi.net>
Source record: 44159

Jerry W Campbell wrote:
>
> A friend died an his wife gave me a
> a bunch of radio junk. In the box I found a Heathkit HM-2102
> VHF power/swr meter. There was no manual and I don't know
> what the SWR Sensitivity knob is for or how to set it.
> I was hoping someone here might know and could tell me in a few words.
> Thank You,
> Jerry KB7BKN
> Summit, Oregon

Its simple. Turn the knob all the way down. Set the meter to read
forward power. Turn the knob up to exactly full scale. Set to
reflected power. Read SWR.

I have one of these meters with the manual somewhere in storage.

3519. Re: SWR/Power Meter Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-13 20:09:24 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <X4VD8.2094$k%3.213696@newsfep1-win.server.ntli.net>
Source record: 44161

> A friend died an his wife gave me a
> a bunch of radio junk. In the box I found an Heathkit HM-2102
> power/swr meter. There was no manual and I don't know
> what the SWR Sensitivity knob is for or how to set it.
> I was hoping someone here might know and could tell me
> in a few words.
==========
I have this unit as well.
1) Put left hand switch in SWR position
2) Pull right hand potmeter/switch to set SWR sensitivity
3) Rotate potmeter mentioned in 2) until meter shows full scale deflection
4) Push switch as mentioned in 2) and read SWR.
5) For power reading switch left hand switch to 250 or 25 (Watts) ,keeping
switch as mentioned in 2)
pushed-in.

You can find a complete circuit diagramme of the HM-2102 ,which will explain
everything ,at :
http://www.circuitarchive.co.uk/heath.htm

Good Luck

Frank gm0csz.kn6wh@ntlworld.com

3520. 17 meter SSB QRP calling frequency XTAL

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-13 21:12:44 UTC
From: gpatterson53@hotmail.com
Message-ID: <9c2b8e62.0205131312.7f8c909a@posting.google.com>
Source record: 44162

Anyone know a source for a 18.130 mhz crystal. A frequency close would also work.

Gary
W4AF

3521. Looking for "good" rocker switches

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-13 22:52:48 UTC
From: dnb <dnb@comcastt.net>
Message-ID: <3tXD8.1745$fU2.499489@bin8.nnrp.aus1.giganews.com>
Source record: 44163

All the sources I've been able to find seem to have the same, cheap, ugly rocker switches like at Radio Shack. Nothing that even looks remotely like what is in the average car. While I could slog through a (faraway) junk yard and maybe find something, I'd really like to find a good source to buy from. So far Mouser and similar, custom car/van shops have yielded nothing. Automotive voltage/ low current and 12V backlighting is essential to my application.

Something like

http://www.vehicle-wiring-products.co.uk/VWPweb2000/switch-2/switch-2.html

would be great if available in the US (plus those UK prices are a bit steep!)

thanks,

dnb

3522. Re: Looking for "good" rocker switches

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-14 02:08:11 UTC
From: Idontwantspam@net
Message-ID: <3ce070d0.5671673@news.bellatlantic.net>
Source record: 44164

On Mon, 13 May 2002 22:52:48 GMT, "dnb" <dnb@comcastt.net> wrote:

>All the sources I've been able to find seem to have the same, cheap, ugly
>rocker switches like at Radio Shack. Nothing that even looks remotely like
>what is in the average car. While I could slog through a (faraway) junk
>yard and maybe find something, I'd really like to find a good source to buy
>from. So far Mouser and similar, custom car/van shops have yielded nothing.
>Automotive voltage/ low current and 12V backlighting is essential to my
>application.
>
>Something like
>
>http://www.vehicle-wiring-products.co.uk/VWPweb2000/switch-2/switch-2.html
>
>would be great if available in the US (plus those UK prices are a bit
>steep!)
>
Newark Electronics? Last I looked, they had many pages (40+) of
switches.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3523. Re: Low bandwidth Video for a robot

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-14 06:04:36 UTC
From: Mark Little <mark@brigadoon.apana.org.au>
Message-ID: <hg9qba.tnr.ln@chuckie.apana.org.au>
Source record: 44167

If you use compression, it is possible to reduce the size of the image. You will need to do as much of this as possible because any radio signal that will penetrate water to any significant depth will have a very long wavelength and hence a very low frequency. The lower the frequency, the lower the data rate that you can use with it. I would also suspect (but I know very little about VLF (Very Low Frequency) transmissions) that the power required and antenna's length will be major problems for your robot.

Have you ruled out the use of an umbilical cord to carry comms (and possibly power)?

regards,
Mark.

"Matt" <nospammatthewredfearn@hotmail.com> wrote in message news:uSgD8.19762$xb4.3461192@news6-win.server.ntlworld.com...
> I am building an underwater robot for a university project and i want to put
> a video camera on board. I want about 1 frame per second. What radio
> frequencies can be transmitted underwater and recieved either above the
> surface or with an aerial under? At these frequencies would the availiable
> bandwidth cope with a low res (300x300 pixel sampled at 8 bit resolution -
> meaning a total size of 720kbit) image at this kind of refresh rate? Can a
> transmitter/reciever pair for this be bought, or built, for a reasonable
> price? If so please could you point me in the right direction? Any help
> would be greatly appreciated.
>
> Thanks in advance
>
> Matt
>
>

3524. Re: Looking for "good" rocker switches

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-14 06:08:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <4R1E8.8797$v81.1052640@bin4.nnrp.aus1.giganews.com>
Source record: 44165

Try All Electronics in southern California. They have a good selection, and it changes from time to time.

Great prices too!

3525. Re: 17 meter SSB QRP calling frequency XTAL

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-14 07:04:26 UTC
From: n2cqr@clix.pt
Message-ID: <3ce0b6c0.3156990110@news.clix.pt>
Source record: 44166

Gary: Jan Crystals will make one for you for about 14 bucks. 73
Bill CU2JL

On 13 May 2002 14:12:44 -0700, gpatterson53@hotmail.com (gary) wrote:

>Anyone know a source for a 18.130 mhz crystal. A frequency close would also work.
>
>Gary
>W4AF

73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 15.7 W
http://planeta.clix.pt/n2cqr

3526. Connecting my homebrew rig to sound card

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-14 07:31:11 UTC
From: rao_vasu@hotmail.com
Message-ID: <3f4c0ce3.0205132331.46762ce1@posting.google.com>
Source record: 44168

Hi All,
I have a home-brew 20 meters HF rig. My interest is CW. I have a external osillator with paddle etc. Presently I turn-on a switch for CW and press the PTT and use the paddle to work CW. Now I have a computer with the sound card etc. Kindly help me in connecting my rig to the sound card, ofcourse I have to manually press the PTT.
Kindly help me with :-
1. How to connect the rig and sound card ?
2. What software should I use to help me in CW receiving and sending.

Thank you in advance for any info and help.

-rgds
Vasudeva
VU3BIP

3527. Re: Terminating HC4066 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-14 09:45:46 UTC
From: Rodney Green <rodagreen@bigpond.com>
Message-ID: <C15E8.10105$b5.34822@newsfeeds.bigpond.com>
Source record: 44169

I have been using 4066, 4016, and 4053 switch ICs. in mixers for about 20 years or so, and I have found them to be very insensitive to termination impedance. I developed a mixer using 74hc4053 called The Ned Kelly mixer (Ned kelly was an armour wearing bullet proof bush ranger in the 1800s) This was published in Electronics World Jan 1999 P59.

I aklso have a new receiver architecture using these mixers in a number of variations. It is called The Bedford Receiver and was published by the ARRL in QEX magazine Sept/ OCT 1999. These articles could prove useful
Regards Rod green of Bedford.

3528. FA: 80 meter Novice Xtal

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-14 12:04:49 UTC
From: Tom N&#65533;JMY - AAR7FV <tfarl@IowaTelecom.net>
Message-ID: <abr23p$c12$1@ins22.netins.net>
Source record: 44170
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

A good xtal for CW use in the 80 meter "novice" band.
It is stamped 3724 kHz. -- in my 2-NT it actually was about 3724.5 kHz. Your mileage may vary.

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=1352445296

Thanks for looking,
Tom N&#65533;JMY

3529. Re: TOKO Coils

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-14 13:44:26 UTC
From: no.spam.lasse.moell@no.spam.swipnet.se
Message-ID: <3ce11487.19870405@news.lin.foa.se>
Source record: 44171

I usually revert to old Circit catalogues, they used to carry the TOKO ranges!

/Lasse SM5GLC

On Thu, 9 May 2002 21:23:01 -0500, "Mark Mansfield" <mmans@aeneas.net> wrote:

>I have a JWMiller catalog from the early 80's that had their
>adjustable ceramic core parts along with the number of turns on
>those cores, which is very handy if you want to wind up some for
>your own projects. I have it scanned in .pdf format and will send
>it to someone who has a ftp site and makes it available to others.
>I also have some older Amidon catalogs that needs scanning in.
>If anyone has the space on a ftp site and wants to host the files,
>get with me and we'll work out the details (file size and such).
>Mark
>
>"J M Noeding" <la8ak.xnd@online.no> wrote in message
>news:3cdae7ce.768691726@news.online.no...
>> On Thu, 09 May 2002 14:52:33 GMT, Gary Morton <gary@alma.demon.co.uk>
>> wrote:
>>
>> >J Rob wrote:
>> >>
>> >> Will this web page help?
>> >>
>> >> www.tokoam.com/passives/index.asp
>> >>
>> >> RM~
>> >
>> >Thanks for the pointer. This is the current TOKO product range. The
>> >parts I have are older, but impossible to say how much older.
>> >
>> Yes, this is the problem, and if you check few months back you will
>> see several more replies on this matter, but you may probably not find
>> any of your coils listed, I have several douzens of TOKO coils, but
>> not found any of mine listed. So perhaps I have to make my own list
>> based on measurements, hi.
>> Believe it was some info at SM0VPO or similar site, but they didn't
>> apply for many of my coils
>>
>> It is also a problem to identify coils from the way they are listed in
>> the price-list. Amidon had a list, those catalogues may be worth a lot
>> today, I also have some older lists from late 70's which should be

>> scanned and decoded
>>
>> 73
>> LA8AK
>> --
>> remove ,xnd to reply
>
>

3530. DIYS crystal CB transmitter / receiver ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-14 17:11:42 UTC
From: Torfi <torfitorf@yahoo.com>
Message-ID: <3ce1455c$0$4086$9b622d9e@news.freenet.de>
Source record: 44172

Hello All!

does anybody know of a schematic for simple CB (27MHz, or possibly 49MHz or other "free" or ISM frequencies) transmitter and receiver (seperate) circuits? best would be crystal controlled for frequency stability, micropower (<1W, maybe 100-200mW) would be sufficient. modulation is not very important, should be capable of an audio-bandwidth of about 3-4 kHz.

It's for a robotics/telemetry (moisture sensor) data link I'm working on, that would send short bursts of data every now and then. Should be low-power as the project is short range (house, yard) and I don't want to disturb any other frequency users.

I'm thinking that crystal controlled would be best for me as a digital boy with no HF experience, to build a non-interfering transmitter??

all comments and uncommented links welcome!

regards,

Torfi

3531. Re: DIYS crystal CB transmitter / receiver ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-14 17:47:00 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <ue2jcnotbgtgf6@corp.supernews.com>
Source record: 44173

buy a couple of used cbs at the fleas and use them and if your project works
then miniaturize..
hank wd5jfr
"Torfi" <torfitorf@yahoo.com> wrote in message
news:3ce1455c$0$4086$9b622d9e@news.freenet.de...
> Hello All!
>
> does anybody know of a schematic for simple CB (27MHz, or possibly 49MHz
or
> other "free" or ISM frequencies) transmitter and receiver (seperate)
> circuits? best would be crystal controlled for frequency stability,
> micropower (<1W, maybe 100-200mW) would be sufficient. modulation is not
> very important, should be capable of an audio-bandwidth of about 3-4 kHz.
>
> It's for a robotics/telemetry (moisture sensor) data link I'm working on,
> that would send short bursts of data every now and then. Should be
> low-power as the project is short range (house, yard) and I don't want to
> disturb any other frequency users.
>
> I'm thinking that crystal controlled would be best for me as a digital boy
> with no HF experience, to build a non-interfering transmitter??
>
> all comments and uncommented links welcome!
>
> regards,
>
> Torfi
>
>
>
>
>
>
>

3532. Re: Low bandwidth Video for a robot

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-14 18:50:50 UTC
From: Brian Short <k7on@earthlink.net>
Message-ID: <MPG.174b6d37ce5df2429896fd@news.earthlink.net>
Source record: 44174

Perhaps you're already familiar with it, but try:
comp.robotics.misc

Brian

In article <uSgD8.19762$xb4.3461192@news6-win.server.ntlworld.com>,
nospammatthewredfearn@hotmail.com says...
> I am building an underwater robot for a university project and i want to put
> a video camera on board. I want about 1 frame per second. What radio
> frequencies can be transmitted underwater and recieved either above the
> surface or with an aerial under? At these frequencies would the availiable
> bandwidth cope with a low res (300x300 pixel sampled at 8 bit resolution -
> meaning a total size of 720kbit) image at this kind of refresh rate? Can a
> transmitter/reciever pair for this be bought, or built, for a reasonable
> price? If so please could you point me in the right direction? Any help
> would be greatly appreciated.

--
People who think they know it all are annoying
to those of us who do.
--
See my web page: http://www.k7on.com/
--

3533. Re: Looking for "good" rocker switches

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-14 20:02:28 UTC
From: derek_toeppen@agilent.com
Message-ID: <2219e080.0205141202.34c6aec8@posting.google.com>
Source record: 44175

"dnb" <dnb@comcastt.net> wrote in message
news:<3tXD8.1745$fU2.499489@bin8.nnrp.aus1.giganews.com>...

Try Digi-key.

http://info.digikey.com/T022/V5/0707.pdf

http://info.digikey.com/T022/V5/0731.pdf

> All the sources I've been able to find seem to have the same, cheap, ugly
> rocker switches like at Radio Shack. Nothing that even looks remotely like
> what is in the average car. While I could slog through a (faraway) junk
> yard and maybe find something, I'd really like to find a good source to buy
> from. So far Mouser and similar, custom car/van shops have yielded nothing.
> Automotive voltage/ low current and 12V backlighting is essential to my
> application.
>
> Something like
>
> http://www.vehicle-wiring-products.co.uk/VWPweb2000/switch-2/switch-2.html
>
> would be great if available in the US (plus those UK prices are a bit
> steep!)
>
> thanks,
>
> dnb

3534. Re: Connecting my homebrew rig to sound card

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-14 20:37:52 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <3CE175A0.C607712B@dialpoint.net>
Source record: 44176

Go here for the softwear.

http://www.muenster.de/%7Ewelp/sb.htm

3535. ** FLEA at MIT ** Sunday May 19th Cambridge MA

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-14 23:55:10 UTC
From: w1gsl@mit.edu
Message-ID: <3ce1a3de$0$3950$b45e6eb0@senator-bedfellow.mit.edu>
Source record: 44178
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,rec.radio.info,sci.electronics.misc,ne.forsale,ne.general,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

This coming Sunday....

!! ** More Buyers PARKING available ** for details see
http://web.mit.edu/w1gsl/Public/flyer

*** !!!! In our Traditional GARAGE and lot !!!! ****
so come rain or shine or super heat the Flea is on !!!

********* $1 buyers discount with hardcopy of this notice ********

COMPUTERS - ELECTRONICS - HAM RADIO - COMPUTERS - ELECTRONICS - HAM RADIO

FLEA all SUMMER at MIT
Sunday May 19th 2002
9AM-2PM

Come to the city for a great flea - plenty of free parking.

MIT's electronics and ham radio flea will take
place on the third Sunday of each month this summer,
April thru October.

There is tailgate space for over 600 sellers and
free, off-street parking for >2000 cars!

Buyers admission is $5 (you get $1 off if
you're lucky enough to have a copy of our ad)
and sellers spaces are $20 for the first and
$15 for each additional at the gate.

The flea will be held at the corner of Albany and
Main streets in Cambridge; right in the Kendall
Square area from 9AM to 2PM, with sellers set-up
time starting at 7AM.

SEASON PASS + Advance Discounts

A sellers discount season pass is available which
offers a 33% discount. See the advanced registration
form below for full seller info.

*** Attention Sellers ***
Prepaid vendors.. Season Pass or monthly,
will be admitted FIRST.
Separate lines will form prior to gate opening
for prepaid and nonprepaid vendors

!! RAIN or SHINE !! Have no fear of rain, a covered
well illuminated tailgate area is available for all
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Talk-in: 145.23- (PL 88.5) W1BOS/R and
W1XM/R-449.725/444.725 (PL 114.8/2A).

Sponsors: MIT Electronics Research Society
MIT UHF Repeater Association (W1XM)
MIT Radio Society (W1MX)
Harvard Wireless Club (W1AF)

For more info / advanced reservations 617 253 3776

********** $1 buyers discount with hard copy of this notice ************

<<<<<<<<<<<<<<<<<<<<<<< cut here >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Mail the coupon below by the 5th of the month to be a Prepaid Vendor.

FLEA at MIT 2002 Rates

SELLERS

This year each vendor must have a Cambridge Vendor License.
We will do all the paperwork to get the one day Cambridge licenses.
To keep the spaces affordable we are discounting your first space.
To use your spaces the named vendor MUST be present.
Rates include one admission per space.

Season Pass $99 First Space - includes $70 for Cambridge Vendor Licenses
$70 additional spaces

Advance $17 First space - includes $10 Cambridge Vendor License
$12 Additional Spaces
Must be received by the 5th of the month.

Gate Admission $20 First Space - includes $10 Cambridge Vendor License
$15 Additional Spaces
Admission is after the prepaid vendors

Early Bird Buyer -Admission after the prepaid vendor line is admitted. ~ 7:15AM
** You may not sell. **
$15 per person at the gate.
$70 Season Early Bird Buyer

****************************** cut here ******************************

FLEA at MIT 2002 Advance Space Application

_____ 1st Season Pass @ $99 _____ Additional Season Spaces @ $70

____April ____May ____June ____ July ____Aug ___Sept ____Oct
@ $17 for the first each month + $12 each additional

_____ Season Early Bird Buyer @ $70 ** NB You may not sell. **

Name _____ Call _____ $ Included_____

Address _____ Phone _____ Make Check to
The MIT Radio Society
City _____ State _____ Zip _____ PO Box 397082
Cambridge MA 02139
E-mail _____

****
Steve Finberg W1GSL w1gsl@mit.edu
PO Box 82 MIT Br Cambridge MA 02139-7082 617 258 3754
****

3536. Re: DIYS crystal CB transmitter / receiver ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-15 01:17:54 UTC
From: wb3fup@webtv.net
Message-ID: <14440-3CE1B742-33@storefull-2331.public.lawson.webtv.net>
Source record: 44180

If your only interested in one-way communications, (robot to base)
investigate RC cars, and stripping the radios out of them. Your local
Radio Shack might be willing to sell you some trash yhat you can strip
the radios.

DIYS crystal CB transmitter / receiver ?

Group: rec.radio.amateur.homebrew Date: Tue, May 14, 2002, 7:11pm
(EDT+6) From: torfitorf@yahoo.com (Torfi)
Hello All!
does anybody know of a schematic for simple CB (27MHz, or possibly 49MHz
or other "free" or ISM frequencies) transmitter and receiver (seperate)
circuits? best would be crystal controlled for frequency stability,
micropower (<1W, maybe 100-200mW) would be sufficient. modulation is not
very important, should be capable of an audio-bandwidth of about 3-4
kHz.
It´s for a robotics/telemetry (moisture sensor) data link I´m
working on, that would send short bursts of data every now and then.
Should be low-power as the project is short range (house, yard) and I
don´t want to disturb any other frequency users.
I´m thinking that crystal controlled would be best for me as a digital
boy with no HF experience, to build a non-interfering transmitter??
all comments and uncommented links welcome!
regards,
Torfi
---

73 es cul

wb3fup
a salty bear

3537. QUESTION ABOUT DENTRON.....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-15 01:34:39 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3CE1BB2F.2010508@charter.net>
Source record: 44179

what is the difference between the dentron

models CM-1 and CM-2 tuned input boxes?
What i have is a clipperton L i have replaced the caps they are a bit
taller. the bill edwards tuned input internal board will not lay flat in
there now.
I am in sorta of a bind. not much room in the amp to move it around.
Can't put it over the p/s or in the rf compartment. only verticial left
right in front of the meters.
which if installed this way would make it hard to tune the slugs if need be.
anyone have any suggestions?
thanks chris NI4L

--
NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

3538. 6 meter project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-15 02:19:44 UTC
From: Dan Reynolds <bcdlr@insightbb.com>
Message-ID: <4BjE8.2337$gD6.2855@sccrnsc01>
Source record: 44181

This is the 6 M AM transceiver spotlighted by the IA QRP club a year or so ago. This is a rig designed by Rick Littlefield originally called the Nor'easter and published in Communications Quarterly. I have the board, the pots, a used CB modulation transformer, the modulator chip, the crystal filter (the good one), and the coil form. I am also including all documentation, addendums (some items in color), and a copy of the original article. I'll sell it for $20 shipped priority mail (lower 48). This is a really neat project. I've just never had the gumption to get it finished.

Dan KB9JLO

3539. FS: Computer Interface Chips Kenwood

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-15 02:30:00 UTC
From: Dan Reynolds <bcdlr@insightbb.com>
Message-ID: <IKjE8.2256$AU.3850@sccrnsc02>
Source record: 44182
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

I have the two chip set that allows Kenwood TS440, TS-940, TS-811 and TS-711 transceivers and the R-5000 receiver (I believe). I bought them because they were advertised as a IF-10C interface kit and these are NOT an IF-10C interface (that's a board). I'm asking $40 (what I paid) but I'll take best offers. (BTW, the installtion instructions are in the owners manual - not included) Or if you had an IF-10C that you wanted to trade me I'd sure take that!

Dan Reynolds KB9JLO

3540. Looking for a Low Noise Inverter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-15 05:44:38 UTC
From: "Jim Hill, w6ivw" <XXslimjimis@cox.net>
Message-ID: <r4t3eu8o7m4hpnlrhosm8l8msh0fc11rgc@4ax.com>
Source record: 44183

I'm looking for a 12-120V inverter that creates minimal AM radio noise. I collect old radios, and would like to take some with me when using my RV on trips. Ideally, I would like an inverter that would not be heard when I connect a radio, tune around 540 kHz where no station is heard, and turn up the volume. Modern inverters seem to have high frequency switching power supplies that generate plenty of RF. Any suggestions?

3541. Crystal urgently needed!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-15 06:24:40 UTC
From: mbdb@mighty.co.za
Message-ID: <3CE1FF28.4D0@mighty.co.za>
Source record: 44177
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hello,

I'm urgently in need of a crystal(s) in the range 15.020-15.060 Mhz. If anyone has something in this range (any size) and would be willing to part with it please e-mail me ASAP. I'm willing to pay, swap, or return the favour in some way!

Mike M0BST
mbdb@mighty.co.za

3542. Re: Crystal urgently needed!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-15 09:01:25 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3ce22291.1014702@news.freeserve.net>
Source record: 44184
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Tue, 14 May 2002 23:24:40 -0700, mbdb@mighty.co.za wrote:

>Hello,
>
>I'm urgently in need of a crystal(s) in the range 15.020-15.060 Mhz. If
>anyone has something in this range (any size) and would be willing to
>part with it please e-mail me ASAP. I'm willing to pay, swap, or return
>the favour in some way!
>
>Mike M0BST
>mbdb@mighty.co.za
>
>
you might give this guy a shout. He was very helpful to me the other
week when I wanted two xtals within 50Hz of each other at around 10
megs.

I-Q Electronic design,
69 Angus Close,
Chessington,
Surrey,
UK,
KT9 2BN

phone 020-8391-0545
e-mail japj69@netscapeonline.co.uk

hth atb Mike W, G8NXD qthr

3543. baggybob smt parts at Dayton 4055 & 4056

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-15 12:27:14 UTC
From: baggybob@execpc.com
Message-ID: <3ce25421$0$3576$272ea4a1@news.execpc.com>
Source record: 44185

Soon we will start the annual pilgrimage to Dayton to find our hereditary parking spot. We will be at locations 4055 and 4056 with the usual assortment of smt caps, transistors, inductors and resistors for prototypers and experimenters. This year I have resistor assortments in 0805 size as well as 1206 size. See you there !!!!

baggybob

3544. Connecting my homebrew rig to sound card

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-15 12:42:30 UTC
From: rao_vasu@hotmail.com
Message-ID: <3f4c0ce3.0205150442.6766e8cc@posting.google.com>
Source record: 44186
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Thank you Ralph. My requirement was about the impedance matching (my field is digital electronics hi hi hi... weak in analog). What precautions should be taken while connecting the sound card output to the rig and speaker output of the rig to the sound card mic input.

thanks in advance

vasudeva

3545. Re: Looking for a Low Noise Inverter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-15 14:36:46 UTC
From: Michael Neverdosky <michaeln@cfl.rr.com>
Message-ID: <3CE27257.FE4EDF3D@cfl.rr.com>
Source record: 44187

"Jim Hill, w6ivw" wrote:
>
> I'm looking for a 12-120V inverter that creates minimal AM radio
> noise. I collect old radios, and would like to take some with me when
> using my RV on trips. Ideally, I would like an inverter that would
> not be heard when I connect a radio, tune around 540 kHz where no
> station is heard, and turn up the volume. Modern inverters seem to
> have high frequency switching power supplies that generate plenty of
> RF. Any suggestions?

You are going to have to go with one of the 'true sine wave' inverters.
They are much more expensive, depending on the power required, but they
make much less noise.

http://www.homepower.com/
Is a web site that should have links and references that will help you
find something.

I can dig through some of my catalogs if you can't find anything.

michael

3546. Re: Looking for a Low Noise Inverter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-15 15:05:20 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <QOuE8.187878$q8.18881415@bin3.nnrp.aus1.giganews.com>
Source record: 44188

It may be easier to build a sine oscillator/amplifier and then use a transformer. If you don't want to screw around building a wien bridge, use a square wave oscillator and put an active low pass filter (you'll need 3 or 4 sections) on the output. You don't need a low distortion amplifier, just make sure there's no DC on the output. Note, the transformers in tube equipment work fine at 60Hz, but you don't need to run the oscillator at such a low frequency for this application, and is probably irrelevant if you are running the old "hot chasis" am radios. A couple years ago I posted on this bb the fact that we used McIntosh amps with 6L6's to run experiments in the solid state physics lab where we had to be completely divorced from the AC mains. Lastly, Linear Technology has some low noise switcher chips which would work well in in a push-pull configuration. Search on their website. (www.linear.com)

"Michael Neverdosky" <michaeln@cfl.rr.com> wrote in message news:3CE27257.FE4EDF3D@cfl.rr.com...
> "Jim Hill, w6ivw" wrote:
> >
> > I'm looking for a 12-120V inverter that creates minimal AM radio
> > noise. I collect old radios, and would like to take some with me when
> > using my RV on trips. Ideally, I would like an inverter that would
> > not be heard when I connect a radio, tune around 540 kHz where no
> > station is heard, and turn up the volume. Modern inverters seem to
> > have high frequency switching power supplies that generate plenty of
> > RF. Any suggestions?
>
> You are going to have to go with one of the 'true sine wave' inverters.
> They are much more expensive, depending on the power required, but they
> make much less noise.
>
> http://www.homepower.com/
> Is a web site that should have links and references that will help you
> find something.
>
> I can dig through some of my catalogs if you can't find anything.
>
> michael
>

3547. Wide band Radio Transceiver Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-15 19:56:56 UTC
From: smishra@smishra.com
Message-ID: <8787ae79.0205151156.f6a0df3@posting.google.com>
Source record: 44189

Hello:
Is there a commercial wideband RF transceiver board which can be
controlled by a host to set its

1. Base frequency
2. Passband frequency width (upto 1 MHz if possible)

I am thinking of experimenting with RF links using DSP. I am currently
thinking of building something like

Antenna <--> Transceiver Board <--> A/D,D/A <--> DSP
| | |
|_____|_____|
HOST

I am an EE so I have ready access to and knowledge of DSP and A/D and
D/A boards and host boards. However I have not yet been able to
identify a transceiver board that would fit the requirement.

I do not want to build my own board since my interest is in playing
with software.

Thanks
Sanjay

3548. Re: Connecting my homebrew rig to sound card

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-15 21:10:06 UTC
From: radiofun <radiofun@charter.net>
Message-ID: <ue5jljmnt7qr7d@corp.supernews.com>
Source record: 44190
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Should do fine. I wouldn't overdrive the input though. A transformer isn't needed. At least I don't use one, and it works fine.

Bill
KC4KMG

--
Web Site: www.polkcounty.org/radiofun

"Vasudeva" <rao_vasu@hotmail.com> wrote in message
news:3f4c0ce3.0205150442.6766e8cc@posting.google.com...
> Thank you Ralph. My requirement was about the impedance matching (my
> field is digital electronics hi hi hi... weak in analog). What
> precautions should be taken while connecting the sound card output to
> the rig and speaker output of the rig to the sound card mic input.
>
> thanks in advance
>
> vasudeva

3549. Re: Terminating HC4066 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-15 22:13:16 UTC
From: la8ak.xnd@online.no
Message-ID: <3ce2da26.7275615@news.online.no>
Source record: 44191

On Tue, 14 May 2002 17:45:46 +0800, "Rodney Green"
<rodagreen@bigpond.com> wrote:

>I have been using 4066, 4016, and 4053 switch ICs. in mixers for about 20
>years or so, and I have found them to be very insensitive to termination
>impedance. I developed a mixer using 74hc4053 called The Ned Kelly mixer
>(Ned kelly was an armour wearing bullet proof bush ranger in the 1800s) This
>was published in Electronics World Jan 1999 P59.
>
>I aklso have a new receiver architecture using these mixers in a number of
>variations. It is called The Bedford Receiver and was published by the ARRL
>in QEX magazine Sept/ OCT 1999. These articles could prove useful
>Regards Rod green of Bedford.
>
>
tnx.
this is what I expected, but it seems often to be lot of experience
presented by hams which is not based in any facts, so you may wonder
what is the secret in 50 ohm terminations. In my opinion 200 ohm is
better for RF, and for my purpose - on 136kHz - I don't see the need
to use a diplexer for proper termination on 100MHz or above

So I am pleased to learn about your experience regarding termination.
A friend who is experimenting with this says he cannot note any
intermodulation products provided the peak-to peak signal is lower
than the supply voltage, so it seems difficult to overload the mixer.,
it would mean a signal level of +15dBm on the antenna, but no signals
below few MHz has be found to be stronger than -50dBm on the active
antenna used for LF

73
Jan-Martin, LA8AK
on the Rubber Coast
--
remove ,xnd to reply

3550. Re: Connecting my homebrew rig to sound card

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-15 23:54:28 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <3CE2F534.90C6CD0C@dialpoint.net>
Source record: 44193
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Don't worry about matching the impedance. When you have a source such as a 8 ohm speaker and are feeding into a sound card with an input impedance that is way over 10 times higher there is no loading and not much distortion. You just have to have enough driving power which the sound card has plenty of. Same as for the input to the transmitter. You may have much more drive than needed and you may need to insert about a 10K to 100k resistor in series with the wire comming from the audio card and then put a 1 K resistor to ground to cut out some of the drive.

Vasudeva wrote:
>
> Thank you Ralph. My requirement was about the impedance matching (my
> field is digital electronics hi hi hi... weak in analog). What
> precautions should be taken while connecting the sound card output to
> the rig and speaker output of the rig to the sound card mic input.
>
> thanks in advance
>
> vasudeva

3551. Power FETs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-16 00:09:12 UTC
From: Professor <bgriffey@core.com>
Message-ID: <3ce2f88a$0$3568$1dc6e903@news.corecomm.net>
Source record: 44192

Does anyone know what parameters usually apply in matching RF power FETs?
Do they normally match for more than just Gfs?

--
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Professor
http://members.core.com/~bgriffey/SkyWave%202879AB.pdf
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

3552. Re: Terminating HC4066 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-16 02:34:17 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <abv62aqoj1@slb4.atl.mindspring.net>
Source record: 44194

I would expect 200 ohms would be a good range although there are
tradeoffs.

I would make sure to match the output of the Antenna to the same
impedance. The reasoning is, the ON resistance of a 4066 is quite a few
ohms, and so the insertion loss in a 200 ohm system will be lower.

You do lose a little of the maximum input level, due to the impedance
transform raising the RF input voltage.

As for terminating the LO frequencies at the mixer output with a diplexer,
I wouldn't worry too much about it. The internal isolation of the 4066 is
good enough that the amount of LO energy on the output can reflect back into
the switch and not degrade the performance very much at your frequencies.

So, the tradeoff choice is, lower conversion loss/lower intermod point
with 200 ohms or higher insertion loss/higher intermod point with 50 ohms.

You can more or less predict the distortion point, since the RF will clip
as you approach VCC. Obviously the switch has to be DC biased to half of
VCC for maximum dynamic range.

I'd supply DC on the output side of the mixer, and AC couple the input.
The input will go to 1/2 VCC as the switches turn on. Leaving the input
floating to DC will minimize the tenancy for the DC level to change as the
switches turn on and off.

Given the noise level at the VLF frequencies you want to use, I'd be
inclined to go with 50 ohms since you can afford the conversion loss....

Jim Pennell
N6BIU

3553. FS: 5 Bags of Neat stuff w/pics, Chokes, Toroids, meters, Cheep!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-16 03:09:01 UTC
From: rlucch2098@aol.com
Message-ID: <20020515230901.01644.00006156@mb-mg.aol.com>
Source record: 44195

Hi Fellas;
I have for SALE:
1- bag of 120+ asstorted chokes, most are 2.7, 153.3, 1.7, 146, 105, 42, 3.1uH & 4.0mH Price is $20ppd>>

http://www.myradioroom.com/120asstchokes.jpg

2- 250+ Chokes , measure 3.3uH, all NOS, price $12.00ppd>>

http://www.myradioroom.com/250chokes.jpg

3- 12 miniature meters, 10 are RF/S type, 1 is Battery, 1- not marked. Great for small tuners , qrp, etc. These are pulls & 6 have built in bulbs. All have been tested with a VOM for meter movement only! Prics is $20ppd>>

http://www.myradioroom.com/12meters.jpg

4- 35 assorted wire wound Toroids/chokes, blanks, remove the wire & wind your own. Price is $20.00>>

http://www.myradioroom.com/35toroids.jpg

5- 200+ ferrite chokes. I measured a few at 1.0uH average, all are NOS, Price is $12.00ppd>>

http://www.myradioroom.com/200chokes.jpg

All buyers will receive a small bag of free goodies.
Thanks es 73.....RICH-WA2RQY RLUCCH2098@aol.com
Manual Copies @ http://www.myradioroom.com/manualsale.html
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

3554. FS-EICO model 1171 Resistance decade box, EXC $20ppd

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-16 03:10:54 UTC
From: rlucch2098@aol.com
Message-ID: <20020515231054.01644.00006159@mb-mg.aol.com>
Source record: 44196

Hi Fellas;
I have for SALE:
Beautiful Eico Decade box for $20ppd.
Here are a few pics>>

http://www.myradioroom.com/eicodecade1.jpg

http://www.myradioroom.com/eicodecade2.jpg

Thanks es 73..........RICH-WA2RQY RLUCCH2098@aol.com
Manual Copies @ http://www.myradioroom.com/manualsale.html
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

3555. Re: Connecting my homebrew rig to sound card

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-16 06:24:06 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0205152224.370882a4@posting.google.com>
Source record: 44097
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

rao_vasu@hotmail.com (Vasudeva) wrote in message
news:<3f4c0ce3.0205150442.6766e8cc@posting.google.com>...
> Thank you Ralph. My requirement was about the impedance matching (my
> field is digital electronics hi hi hi... weak in analog). What
> precautions should be taken while connecting the sound card output to
> the rig and speaker output of the rig to the sound card mic input.
>
> thanks in advance
>
> vasudeva

Receiving is no problem. Use the speaker out from the rig to the "line in" on the sound card. You can adjust the volume withing the computer. Also you can adjust the volume from the rig. To the rig, the main thing is to just not overdrive the mike input, and I always check the polarity. I want the ground side on the computer card going to the ground side on the rig. On the 706 I've been using I rigged up a set of resisters and a pot to adjust the level. I can also adjust within windows also. I might add... If your card only has a "mike" input and no line input, you may need to lower the gain to the sound card. A "mike in" is more sensitive than a "line in". But most all cards made in the last few years have a line in. MK

3556. Re: Terminating HC4066 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-16 07:23:39 UTC
From: Markus Wolfgart <xx_markus.wolfgart@dlr.de>
Message-ID: <3CE35E7B.3F4D3C99@dlr.de>
Source record: 44098

Hi Jan-Martin and others,

as far as I have not enough expirance with a 4066 mixer, but
what about the adg711-712-713 ic from AD.
The ON resistance is between 4 to 8 ohm depending on the
supply voltage.
The ic is much more expansiv, but is suitable up to 200MHz.
Would be great to find someone to make some test with it.

Markus

DL8MBY

3557. Re: Terminating HC4066 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-16 10:43:22 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <e3ME8.12620$gD6.27383@sccrnsc01>
Source record: 44099

> as far as I have not enough expirance with a 4066 mixer, but
> what about the adg711-712-713 ic from AD.
> The ON resistance is between 4 to 8 ohm depending on the
> supply voltage.
> The ic is much more expansiv, but is suitable up to 200MHz.
> Would be great to find someone to make some test with it.

The FST 3125 from Fairchild, Texas Instruments, Perricom and others exhibits under 4 ohms of Rdss, works to somewhere well above 30 MHz, has the switch drivers on board, and an Ip3 of above +42 dBm, (With square wave LO) . It costs under a buck in single quantities from DigiKey. (TI is $1.02). I've measured under 5 dB conversion loss in the "H" mode configuration with both MCL TT4:1A transformers at 200 ohms and MCL T1:1T's at 50 ohms, both at 20 meters. Slightly more using T4:1's. It all gets better (But not a lot) when you raise Vdd from 5 volts to 7 volts, max ratings. Available in both SSOP and TSSOP.

W4ZCB

3558. Re: Power FETs...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-16 11:42:51 UTC
From: sparky@cet.com
Message-ID: <3ce39af0.7367419@news.cet.com>
Source record: 44100

In <3ce2f88a$0$3568$1dc6e903@news.corecomm.net>, "Professor"
<bgriffey@core.com> wrote:

>Does anyone know what parameters usually apply in matching RF power FETs?
>Do they normally match for more than just Gfs?

It depends on how and for what they are being used. Got another
illegal CB amp on the drawing board, Brian?

3559. Items Up For Grab.... Sell Or Trade.....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-16 16:05:31 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3CE3D8CB.7090903@charter.net>
Source record: 44101
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

http://www.angelfire.com/nb/ni4l/lwtuner.jpg.JPG
Nice home brew antenna tuner. easy handle legal limit
will work on coax or a long wire.
80.00 + shipping m/o paypal or cashier check.

For sale nice 250 all mode swan 250 6 meter rig with power supply
Have book and prints. work fine looks good a few little scratches on the
face nothing bad though. 275.00 + shipping m/o pay pal or cashier check
http://www.angelfire.com/nb/ni4l/swan250.jpg.JPG

450 Shure desk mic in good shape.
35.00 + shipping M/O pay pal or cashiers check

B&W Low pass filter model 425 ex condition.
20.00 + shipping M/O pay pal cashier check

Have 5 brand new GE 6LR6 tubes.
30.00 each.
M/O pay pal or cashier check

2 NEW IN THE BOX CHINESE 811A TUBES 22.50 EACH + SHIPPING.
M/O pay pal or cashiers check

FS ATLAS 210X base/mobile unit with power supply and external hard to
find frequency counter. in good shape.
210.00 + shipping
M/O pay pal or cashiers check

Palomar 300A amp 10-40 meters external power supply great shape full
output.
300.00 + shipping

2 used GE 8950 tested they produce full output 30.00 each + shipping.

Siltronix 1011D parts rig. Looks good very useful if your rebuilding one
has plenty of great parts. 55.00 + shipping

--
NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

3560. Re: Terminating HC4066 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-17 04:26:21 UTC
From: Markus Wolfgart <xx_markus.wolfgart@dlr.de>
Message-ID: <3CE4866D.AD60E9EA@dlr.de>
Source record: 44102

Hallo Harold and the world,

is such a switch ic suitable for qrp (means power consumption)
and also suitable for direct conversion to audio by a pair of
this ic (I and Q chanal) to avoid the sideband filter?
Have anybody made experience with this technique?

Would be great to get some hints what to pay attention for when
designing such a rx.

Markus

DL8MBY

"Harold E. Johnson" schrieb:
>
> > as far as I have not enough expirance with a 4066 mixer, but
> > what about the adg711-712-713 ic from AD.
> > The ON resistance is between 4 to 8 ohm depending on the
> > supply voltage.
> > The ic is much more expansiv, but is suitable up to 200MHz.
> > Would be great to find someone to make some test with it.
>
> The FST 3125 from Fairchild, Texas Instruments, Perricom and others exhibits
> under 4 ohms of Rdss, works to somewhere well above 30 MHz, has the switch
> drivers on board, and an Ip3 of above +42 dBm, (With square wave LO) . It
> costs under a buck in single quantities from DigiKey. (TI is $1.02). I've
> measured under 5 dB conversion loss in the "H" mode configuration with both
> MCL TT4:1A transformers at 200 ohms and MCL T1:1T's at 50 ohms, both at 20
> meters. Slightly more using T4:1's. It all gets better (But not a lot) when
> you raise Vdd from 5 volts to 7 volts, max ratings. Available in both SSOP
> and TSSOP.
>
> W4ZCB

3561. Want to print first class QSLs for a very low price?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-17 06:12:12 UTC
From: Gennady Treus <ux5uo@qsl.net>
Message-ID: <ac27ki$ro3$2@ns2.nursat.net>
Source record: 44103

Hi,

You may order your new QSL-cards from UX5UO:
Almost any type of QSL cards is available today.

Price of 1000 QSL-cards (including handling and mailing fee) is:
"Simple" (single colour one side 150 g/sq.m paper) cards - 22 USD*
"Advanced" (single colour one side 200 g/sq.m paper) cards - 26 USD
"Middle" (two colours one side 200 g/sq.m paper) cards - 32 USD
"Middle2" (two colours double sided 200 g/sq.m paper) cards - 38 USD
"Business" (200 g/sq.m paper double sided matt photo) cards - 44 USD
"Luxury" (200 g/sq.m paper double sided glossy photo) cards - 56 USD

Discount for ordering 3000 and more cards as well.
500 cards is possible as exception. Special discount for DX stations.

Cards will be printed within 3-4 weeks upon receiving order and payment
for all types of cards except picture cards (within 2 months for photo
cards).

Send your order (photos, rough design, text data etc) via mail:
P.Box 925 Kiev-100 02100 Ukraine
Phone (38044) 450-3752

or via e-mail to UX5UO ux5uo@qsl.net

Send the payment* (bank transfer, IRC, cash via REGISTERED mail) to:
Mr Vlad PASHYN (M0UNF)
Address: 43 Nine Acres Road, Cuxton, Kent, ME2 1EN, U.K.
e-mail: vladimir@clara.net

*USA and possessions, Worldwide

Visit my website: http://www.qsl.net/ux5uo , http://www.i.com.ua/~ux5uo
and look at this page: http://www.eham.net/reviews/detail/1136

73 de Gennady UX5UO
mailto: ux5uo@qsl.net

3562. HB 17 SSB on web

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-17 08:12:17 UTC
From: n2cqr@clix.pt
Message-ID: <3ce4ba25.3420071723@news.clix.pt>
Source record: 44104

I've put on my web site some pictures of my homebrew 17 meter SSB
transmitter and a general description of the rig.

http://planeta.clix.pt/n2cqr

Click on "17 meter Single Sideband project"

I hope you find it interesting. Please send comments.

73 Bill CU2JL N2CQR
Sao Miguel Island
Azores Portugal
73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 15.7 W
http://planeta.clix.pt/n2cqr

3563. Re: Connecting my homebrew rig to sound card

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-17 09:49:05 UTC
From: rao_vasu@hotmail.com
Message-ID: <3f4c0ce3.0205170149.1a9e0f28@posting.google.com>
Source record: 44105
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

nm5k@wt.net (Mark Keith) wrote in message
news:<25eb70d7.0205152224.370882a4@posting.google.com>...
> rao_vasu@hotmail.com (Vasudeva) wrote in message
news:<3f4c0ce3.0205150442.6766e8cc@posting.google.com>...
> > Thank you Ralph. My requirement was about the impedance matching (my
> > field is digital electronics hi hi hi... weak in analog). What
> > precautions should be taken while connecting the sound card output to
> > the rig and speaker output of the rig to the sound card mic input.
> >
> > thanks in advance
> >
> > vasudeva
>
> Receiving is no problem. Use the speaker out from the rig to the "line
> in" on the sound card. You can adjust the volume withing the computer.
> Also you can adjust the volume from the rig. To the rig, the main
> thing is to just not overdrive the mike input, and I always check the
> polarity. I want the ground side on the computer card going to the
> ground side on the rig. On the 706 I've been using I rigged up a set
> of resisters and a pot to adjust the level. I can also adjust within
> windows also. I might add... If your card only has a "mike" input and
> no line input, you may need to lower the gain to the sound card. A
> "mike in" is more sensitive than a "line in". But most all cards made
> in the last few years have a line in. MK

Thank you Mark. I am planning to use a creative sound card with
windows 95 and it has the "line in" input, so no problem on that. I
will take care of the polarity also. If possible kindly give me your
setup of the resistors and the pot, so that I can duplicate it here in
my setup. My basic fear is that my rig is a homebrew with 48V at the
final pumping out 25W and I don't want to blow-up things. Also my main
concern is receiving CW, I can manage sending at 10WPM.

thanks again
73
vasudeva

3564. Re: "Natural Radio" VLF Discussion Group

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-17 10:28:16 UTC
From: "I.R Baboon" <i.r.baboon@volcanomail.com>
Message-ID: <3CE4DB40.BE27E406@volcanomail.com>
Source record: 44106

Why not try "Radio waves below 22 kHz message board" on
http://pub2.bravenet.com/guestbook/show.php?usernum=153801959&cpv=1

?

J M Noeding wrote:
>
> On Sat, 04 May 2002 18:26:47 -0400, Dave Holford
> <holford@sympatico.ca> wrote:
>
> >
> >
> >Phillip Jockell wrote:
> >>
> >> I would be interested in a newsgroup, but not the "Yahoo based"
> >> groups. Just in case anyone is keeping count of such...
> >>
> >> Phil - N4GWV
> >>
> >
> >I agree
> >
> >Dave VE3HLU
>
> I've blocked against certain type of rubbish messages with MSOE, but
> with such newsreflectors you have to check the dustbin to see how many
> of your desired messages are killed
>
> LA8AK
> --
> remove ,xnd to reply

3565. Re: Terminating HC4066 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-17 11:14:44 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <EC5F8.23239$gD6.36663@sccrnsc01>
Source record: 44107

"Markus Wolfgart"
> Hallo Harold and the world,
>
> is such a switch ic suitable for qrp (means power consumption)
> and also suitable for direct conversion to audio by a pair of
> this ic (I and Q chanal) to avoid the sideband filter?
> Have anybody made experience with this technique?

I don't know the power consumption. Not being green or into QRP, I've never measured it. My board layout includes 3 digital 74AC IC's in a variable divider chain and all 4 chips draw 60-100 mA at 5 volts, depending on LO frequency. (110 mA at 150 MHz, about the upper limit of AC logic). I use the 3125 for RF mixing to an RF IF frequency. I have used the FST 3253 (Only takes one for both I and Q) in my construct of Rod Greens Bedford receiver. As far as either of us know, it was the first one built. (After his, and his great article in QEX) Works fine. I use the Burr Brown INA 103 op-amp amplifiers post detection ahead of the phasing networks.
>
> Would be great to get some hints what to pay attention for when
> designing such a rx.

Layout Symmetry!!! And square wave LO. And a steady hand if using the TSSOP package with it's 0.025 leads!

W4ZCB
>

3566. FS C-Band LNB Amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-17 12:35:32 UTC
From: tonyS2@aol.com
Message-ID: <61e40296.0205170435.3d7d2bb@posting.google.com>
Source record: 44108

Unused in box
View at www.pearlone.com
Click Electronics
Tony
Alex Va

3567. Re: HB 17 SSB on web

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-17 13:35:49 UTC
From: Itsme <antwoord_mij@hotmail.com>
Message-ID: <3ce50735$0$6973$ba620e4c@news.skynet.be>
Source record: 44109

Congrats ! Nice job Bill !

73 de on7jq

"Bill Meara" <n2cqr@clix.pt> schreef in bericht
news:3ce4ba25.3420071723@news.clix.pt...
> I've put on my web site some pictures of my homebrew 17 meter SSB
> transmitter and a general description of the rig.
>
> http://planeta.clix.pt/n2cqr
>
> Click on "17 meter Single Sideband project"
>
> I hope you find it interesting. Please send comments.
>
> 73 Bill CU2JL N2CQR
> Sao Miguel Island
> Azores Portugal
> 73 de Bill CU2JL N2CQR
> Sao Miguel Island, The Azores, Portugal
> 37.7 N 15.7 W
> http://planeta.clix.pt/n2cqr

3568. FA Older unbuilt Kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-17 20:13:29 UTC
From: "Ronald J. Wicker" <ronwick@ev1.net>
Message-ID: <3ce547d2$1_1@newsa.ev1.net>
Source record: 44110
Cross-posted to: alt.ham-radio.hf,rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1352797914

Radio Shack, Science Fair, Frequency Standard. Parts in sealed plastic bag, instructions and plastic case. Some scratches , discolored tape and one hair line crack in clear portion of the box(not used).

3569. mod for MD 100

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-17 20:53:40 UTC
From: ve3uuh <ve3uuh@rac.ca>
Message-ID: <3CE56DD4.5050504@rac.ca>
Source record: 44125

Has anyone come up with a way to make the MD 100 work with a Yahoo FT990? There is one mod but it requires a butcher job inside the base of the mike. I tried dropping the voltage from the remote from 13.8 vdc to 5 vdc before the mike and it did not work, any ideas??

3570. Homebrew Transmitter FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-17 22:02:59 UTC
From: Neil L Chavigny <neil@radioranch.com>
Message-ID: <neil-7C1956.17054117052002@newssvr30-ext.news.prodigy.com>
Source record: 44111

Extra nice HF transmitter FS on EBAY

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1353427156

Thanks for the visit.

Neil L Chavigny

--
Radio Ranch
Neil L. Chavigny
Austin, Texas
512 459 6855

3571. Re: Terminating HC4066 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-18 01:16:58 UTC
From: la8ak.xnd@online.no
Message-ID: <3ce5a68a.190699247@news.online.no>
Source record: 44112

Tnx,

now I've built the new converter using 74HC4066 with 10V supply. Use a
TIS88 as buffer to 60kHz two stage BPF (4.5mH coils) and S042P as
mixer up to 3627kHz to be fed into Yaesu FT-902. An old 4069UBE is
used as buffer for the 195-198kHz VFO

Lowest CW signal level easily tuned is -120dBm (75 ohm) and lowest
signal level heard when you know it is there is -126dBm, so the mixer
seem reasonable well without RF stage.

The idea for input circuit (although it seems to be somewhat wrong as
it was used on 7MHz) is found at http://home.snafu.de/graff/sbt40.pdf,
so I use 1.5mH high-Q coils with capacitor values for the 2nd circuit
are 1137pF, 10nF + 10nF (no trimmer capacitor).

A xtal filter described by SM5BSZ was planned, but I didn't succeed
building it for 60kHz, so in the meantime LC-circuit is used, I hope
to visit some friends in the summer holiday to get some help in
trimming it, it isn't so easy when everybody who could help is at
least 200 miles away or in another country, hi.

73
Jan-Martin
LA8AK

On Wed, 15 May 2002 19:34:17 -0700, "Jim Pennell"
<NoSpam@killspam.com> wrote:

> I would expect 200 ohms would be a good range although there are
>tradeoffs.
>
> I would make sure to match the output of the Antenna to the same
>impedance. The reasoning is, the ON resistance of a 4066 is quite a few
>ohms, and so the insertion loss in a 200 ohm system will be lower.
>
> You do lose a little of the maximum input level, due to the impedance
>transform raising the RF input voltage.
>
> As for terminating the LO frequencies at the mixer output with a diplexer,
>I wouldn't worry too much about it. The internal isolation of the 4066 is
>good enough that the amount of LO energy on the output can reflect back into
>the switch and not degrade the performance very much at your frequencies.
>
>----------------------
>

> So, the tradeoff choice is, lower conversion loss/lower intermod point
>with 200 ohms or higher insertion loss/higher intermod point with 50 ohms.
>
> You can more or less predict the distortion point, since the RF will clip
>as you approach VCC. Obviously the switch has to be DC biased to half of
>VCC for maximum dynamic range.
>
> I'd supply DC on the output side of the mixer, and AC couple the input.
>The input will go to 1/2 VCC as the switches turn on. Leaving the input
>floating to DC will minimize the tenancy for the DC level to change as the
>switches turn on and off.
>
>
> Given the noise level at the VLF frequencies you want to use, I'd be
>inclined to go with 50 ohms since you can afford the conversion loss....
>
>
> Jim Pennell
> N6BIU
>
>
>

--
remove ,xnd to reply

3572. WTB:Heath ET 3100(Cheap)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-18 01:51:36 UTC
From: Handi Ham <okiemansc@yahoo.com>
Message-ID: <IsiF8.1114$8t.605@newsread2.prod.itd.earthlink.net>
Source record: 44113
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

Just released from hospital this week after third major surgery in 6 months
and can't solder but would like an ET-3100 so I can breadboard and build
while I recover.
Condition not important but price is due to medical bills.
Thanks
...KC0EH...

3573. Re: WTB:Heath ET 3100(Cheap)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-18 02:04:25 UTC
From: Jeffrey D Angus <jangus@socal.rr.com>
Message-ID: <3CE5B695.3080807@socal.rr.com>
Source record: 44114
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

Is that the 12" square or so heathkit bread board trainer? I've got one
of those, please contact me off list.

Jeff

Handi Ham wrote:

>Just released from hospital this week after third major surgery in 6 months
>and can't solder but would like an ET-3100 so I can breadboard and build
>while I recover.
>Condition not important but price is due to medical bills.
>Thanks
>...KC0EH...
>
>

--
"They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety." Benjamin Franklin

3574. Re: Homebrew general coverage receiver - how I did it.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-18 05:53:47 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <L%IF8.22396$D41.549821@bgtnsc05-news.ops.worldnet.att.net>
Source record: 44115

Good to see that you're still out there. Keep up the good work, Gary!

Pete KE9OA

Gapershi <gapershi@aol.common> wrote in message
news:20020511134927.08611.00008255@mb-cp.aol.com...
> Hi,
>
> Maybe you have seen my site before but I will post it here again because
> I have just completed a major redisign of the web site.
> It gives a detailed description of my homebrew receiver 0.3 - 30 MHz.
> Also I have added the technical description of the audio processing board
> which was long overdue.
>
> members.aol.com/gapershi/radio.htm
>
> I hope other homebrewers can document their projects in a similar manner.
> Oh, and before yo ask, no I am not a ham.
>
> Gary
> +++ You can lead a fool to reason, but you can't make him think! +++
> <Gapershi>

3575. PK-88 eprom

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-18 13:22:41 UTC
From: user
Message-ID: <73lceuo93co0rbe95j6prqpf31mvr61uf0@4ax.com>
Source record: 44116
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew

Have a bad eprom in a PK-88. Firmware E1744. Have not been able to
find a .bin file on web to load another one. Used the TF bin to verify
my eprom is bad. Anyone have a programmed eprom or know a location for
a bin file to program a replacement? Thanks!
--
Eddie Seymour,WB4MLE
Delete the capital letters:
wb4mleAT@mindspringDOT.com

3576. Re: PK-88 eprom

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-18 16:22:25 UTC
From: UnTale <io@io.it>
Message-ID: <SevF8.78658$5k4.1710080@twister2.libero.it>
Source record: 44117
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew

> Have a bad eprom in a PK-88. Firmware E1744. Have not been able to
> find a .bin file on web to load another one. Used the TF bin to verify
> my eprom is bad. Anyone have a programmed eprom or know a location for
> a bin file to program a replacement? Thanks!
> --
> Eddie Seymour,WB4MLE
> Delete the capital letters:
> wb4mleAT@mindspringDOT.com

hi,
I've a PK88 eprom (.bin file); I don't remember wich version;
if you need, send me an e-mail to
iz7athNOSPAMMINGGG@yahoo.it
(remove NOSPAMMINGGG)

--
73 de iz7ath, Talino

Homebrew, RF projects and digital tecniques on
http://www.qsl.net/iz7ath
IZ7ATH Talino +39 338 5029196

3577. FS: 5 Weston Panel Meters Nice Big MA ones!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-18 16:58:54 UTC
From: rlucch2098@aol.com
Message-ID: <20020518125854.03693.00000417@mb-fk.aol.com>
Source record: 44118

Hi Fellas;
I have for SALE:
5 Weston meters, for 2-3/4" holes with 3-1/2" bezel dia., 1" thick from the panel(less screws etc).
Pictures tell the rest>>

http://www.myradioroom.com/5meters-1.jpg

http://www.myradioroom.com/5meters-2.jpg
No Cracks or chips in the plastic, all still have sealed screw hole(1 of 3)
One has loose glass, needs re-glue.
Price is $50 + ups.

Thanks es 73..........RICH-WA2RQY RLUCCH2098@aol.com
Manual Copies @ http://www.myradioroom.com/manualsale.html
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

3578. FS: RS 242 WW2 German power triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-18 17:01:27 UTC
From: arnoldg@c2i.net
Message-ID: <3ce689e1.6218696@news1.c2i.net>
Source record: 44119

Hello,

I have several of this antique globe shape German triode in stock. It is directly heated, an European 4-pin base and about 12W anode dissipation. The heater is 3.8V 0.72A, u=17, S = 3.0mA/V Max. anode voltage is 400V.The valves are NOS, but the boxes are mostly in bad shape. You will find a picture at my web site. www.demostenes.no
Just search for RS 242.
Please contact me if you are interested.

Regards,

Arnold Goks�yr
DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267
http://www.demostenes.no

Thousands of different valves in stock as well as sockets,transformers,books,caps,resistors and other components. Web site is updated every week. You can order on-line.

3579. FS: A few Nice items, Galaxy RF-550 Meter, Eico 377, With PICS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-18 17:06:55 UTC
From: rlucch2098@aol.com
Message-ID: <20020518130655.03693.00000422@mb-fk.aol.com>
Source record: 44120

Hi Fellas;
I have for SALE:
1)- 1978(20th ed.) Radio Handbook $22.00ppd>>

http://www.myradioroom.com/1978radiohand.jpg

2)- Eico 377 Audio Generator S/N 5505, Heavy so $25+UPS>>

http://www.myradioroom.com/eicoaudio1.jpg

http://www.myradioroom.com/eicoaudio2.jpg

http://www.myradioroom.com/eicoaudio3.jpg
4)- Galaxy RF-550 400/4000 wattmeter & 6 position antenna switch, Tech Spec because the last owner tried to remote the coupler. Does'nt read but all there minus some screws & the cover, nothing looks burn't. Ceramic Switch & kinda rare. Too bad he screwed it up :-(, A real nice project to Finsih up or use parts for your own design, $25ppd>>

http://www.myradioroom.com/rf550-1.jpg

http://www.myradioroom.com/rf550-2.jpg
Thanks es 73.....RICH-WA2RQY RLUCCH2098@aol.com
Manual Copies @ http://www.myradioroom.com/manualsale.html
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

3580. FS- EICO model 1171 Resistance decade box Excellent shape!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-18 17:14:28 UTC
From: rlucch2098@aol.com
Message-ID: <20020518131428.03700.00000427@mb-fk.aol.com>
Source record: 44121

Hi Fellas;
I have for SALE:
Beautiful Eico Decade box for $23ppd.
Here are a few pics>>

http://www.myradioroom.com/eicodecade1.jpg

http://www.myradioroom.com/eicodecade2.jpg

Thanks es 73..........RICH-WA2RQY RLUCCH2098@aol.com
Manual Copies @ http://www.myradioroom.com/manualsale.html
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

3581. FS: 5-Bags of Neat stuff w/pics, Chokes, Torois, meters, Cheep!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-18 17:18:36 UTC
From: rlucch2098@aol.com
Message-ID: <20020518131836.03700.00000430@mb-fk.aol.com>
Source record: 44122

Hi Fellas;
I have for SALE:
1- bag of 120+ asstorted chokes, most are 2.7, 153.3, 1.7, 146, 105, 42, 3.1uH & 4.0mH Price is $20ppd>>

http://www.myradioroom.com/120asstchokes.jpg

3- 250+ Chokes , measure 3.3uH, all NOS, price $12.00ppd>>

http://www.myradioroom.com/250chokes.jpg

4- 12 miniature meters, 10 are RF/S type, 1 is Battery, 1- not marked. Great for small tuners , qrp, etc. These are pulls & 6 have built in bulbs. All have been tested with a VOM for meter movement only! Prics is $20ppd>>

http://www.myradioroom.com/12meters.jpg

5- 35 assorted wire wound Toroids/chokes, blanks, remove the wire & wind your own. Price is $20.00>>

http://www.myradioroom.com/35toroids.jpg

6- 200+ ferrite chokes. I measured a few at 1.0uH average, all are NOS, Price is $12.00ppd>>

http://www.myradioroom.com/200chokes.jpg

All buyers will receive a small bag of free goodies.

Thanks es 73..........RICH-WA2RQY RLUCCH2098@aol.com
Manual Copies @ http://www.myradioroom.com/manualsale.html
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

3582. FS: TT Model 250 Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-18 19:09:47 UTC
From: Dan Reynolds <bcdlr@insightbb.com>
Message-ID: <%FxF8.35067$gD6.53410@sccrnsc01>
Source record: 44123
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

Ten-tec model 250 power supply. Cosmetically fair
to good condition, electronically in great
condition. Works good. No mods, pilot light works.
Best Offer + shipping, motivated seller.
Dan Reynolds KB9JLO

3583. Re: HB 17 SSB on web

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-18 19:20:31 UTC
From: Dan Reynolds <bcdlr@insightbb.com>
Message-ID: <3QxF8.34364$AU.56636@sccrnsc02>
Source record: 44124

Bill, I liked the looks of your project. I love 17 meter SSB. We'll have
to have a sked sometime. Was it much trouble to get it working? Are you
still using the DSB project as well.
Dan Reynolds KB9JLO
"Bill Meara" <n2cqr@clix.pt> wrote in message
news:3ce4ba25.3420071723@news.clix.pt...
> I've put on my web site some pictures of my homebrew 17 meter SSB
> transmitter and a general description of the rig.
>
> http://planeta.clix.pt/n2cqr
>
> Click on "17 meter Single Sideband project"
>
> I hope you find it interesting. Please send comments.
>
> 73 Bill CU2JL N2CQR
> Sao Miguel Island
> Azores Portugal
> 73 de Bill CU2JL N2CQR
> Sao Miguel Island, The Azores, Portugal
> 37.7 N 15.7 W
> http://planeta.clix.pt/n2cqr

3584. FS: RS31g WW2 German power triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-18 20:46:47 UTC
From: arnoldg@c2i.net
Message-ID: <3ce6bd14.19328321@news1.c2i.net>
Source record: 44126
Cross-posted to: rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Hello,

I have one of these nice vintage power triodes in stock. Heater is 10V
4.8A, anode dissipation is 65W and max anode voltage is 1600V. The
valve is NOS and in its original box. You will find a picture and more
data at my web site - www.demostenes.no
Just search for RS 31g.
Please contact me if you are interested.

Regards,

Arnold Goks&#65533;yr
DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267
http://www.demostenes.no

Thousands of different valves in stock as well as
sockets,transformers,books,caps,resistors and
other components. Web site is updated every week.
You can order on-line.

3585. Re: HB 17 SSB on web

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-19 00:13:10 UTC
From: la8ak.xnd@online.no
Message-ID: <3ce6c840.264876812@news.online.no>
Source record: 44127

On Sat, 18 May 2002 19:20:31 GMT, "Dan Reynolds" <bcdlr@insightbb.com>
wrote:

>> I've put on my web site some pictures of my homebrew 17 meter SSB
>> transmitter and a general description of the rig.
>>
>> http://planeta.clix.pt/n2cqr
>>
didn't see any schematics for the SSB project so I looked at the DSB
project instead. Looks like most of the schematics are found in other
books.
As I just finished a project using 74HC4066, I would believe this
device would simplify such receiver very much, particularly with 500
ohm on the mixer run at 10V DC. Suppose at grounded gate amplifier has
not much gain and a HC4066 mixer has very low loss, so it might have
higher audio output than the homebrew ring-mixer with grounded gate RF
amplifier, see http://home.snafu.de/graff/sbt40.pdf

73
LA8AK
--
remove ,xnd to reply

3586. Re: HB 17 SSB on web

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-19 07:33:04 UTC
From: n2cqr@clix.pt
Message-ID: <3ce75323.148397186@news.clix.pt>
Source record: 44128

Dan: Thanks. DSB rig is now on standby. But I will be using a
smaller, more portable DSB rig during a vacation trip to France later
this year. 73 Bill CU2JL

On Sat, 18 May 2002 19:20:31 GMT, "Dan Reynolds" <bcdlr@insightbb.com>
wrote:

>Bill, I liked the looks of your project. I love 17 meter SSB. We'll have
>to have a sked sometime. Was it much trouble to get it working? Are you
>still using the DSB project as well.
>Dan Reynolds KB9JLO
>"Bill Meara" <n2cqr@clix.pt> wrote in message
>news:3ce4ba25.3420071723@news.clix.pt...
>> I've put on my web site some pictures of my homebrew 17 meter SSB
>> transmitter and a general description of the rig.
>>
>> http://planeta.clix.pt/n2cqr
>>
>> Click on "17 meter Single Sideband project"
>>
>> I hope you find it interesting. Please send comments.
>>
>> 73 Bill CU2JL N2CQR
>> Sao Miguel Island
>> Azores Portugal
>> 73 de Bill CU2JL N2CQR
>> Sao Miguel Island, The Azores, Portugal
>> 37.7 N 15.7 W
>> http://planeta.clix.pt/n2cqr
>
>

73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 25.7 W
http://planeta.clix.pt/n2cqr

3587. Old messages this NG

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-19 09:04:14 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <cVJF8.869$Nh.39175@newsfep1-win.server.ntli.net>
Source record: 44129

Using MS Outlook Express I monitor this NG by downloading ALL NEW messages ONLY, removing them from my system when read.
Up to early this month each time I did receive the NEW messages ONLY as specified.
However since approx 2 weeks the system each time also downloads a few dated messages which were downloaded before and subsequently read and deleted .

Today 19 May 02 I again received a few messages dated 12 & 13 May I had read before and deleted.

Is this due to my system or do all readers of this NG have this problem?

TIA for response

Frank gm0csz.kn6wh@ntlworld.com

3588. Re: Old messages this NG

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-19 10:41:37 UTC
From: Keith <nospamplease@newsguy.com>
Message-ID: <ac7vl802aqq@enews4.newsguy.com>
Source record: 44130

Frank Dinger <gm0csz.kn6wh@ntlworld.com> wrote:

> Today 19 May 02 I again received a few messages dated 12 & 13 May I had
> read before and deleted.
>
> Is this due to my system or do all readers of this NG have this problem?
>
Frank,
Sometimes news servers may hiccup and will download older messages
and present them as new. This is a news server issue and has nothing to
do with OE.

--
Best Regards,

Keith
==========
NW Oregon Radio Page & Windows Freeware
http://n6jpa.home.attbi.com/

3589. Re: Old messages this NG

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-19 12:50:20 UTC
From: Norm Mann <folder0735@hotmail.com>
Message-ID: <3ce79e55$0$187@news.impulse.net>
Source record: 44131

"Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote in message
news:cVJF8.869$Nh.39175@newsfep1-win.server.ntli.net...
> Using MS Outlook Express I monitor this NG by downloading ALL NEW messages
> ONLY, removing them from my system when read.
> Up to early this month each time I did receive the NEW messages ONLY as
> specified.
> However since approx 2 weeks the system each time also downloads a few
dated
> messages which were downloaded before and subsequently read and deleted .
>
> Today 19 May 02 I again received a few messages dated 12 & 13 May I had
read
> before and deleted.
>
> Is this due to my system or do all readers of this NG have this problem?

I had a similar experience some time ago, it was a problem with the ISP's
newsserver. At this point in time, don't worry about your system, but do
notify your ISP.

-CB

3590. Re: Old messages this NG

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-19 13:18:13 UTC
From: Dan Richardson <k6mhe@arrl.net>
Message-ID: <le9feukf4tfli1o5nmhe7kpg4mg52pj3f0@4ax.com>
Source record: 44132

On Sun, 19 May 2002 10:04:14 +0100, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>However since approx 2 weeks the system each time also downloads a few dated
>messages which were downloaded before and subsequently read and deleted .
>
>
>Is this due to my system or do all readers of this NG have this problem?
>
>TIA for response

I don't have that problem with Agent.

Danny

3591. Re: Old messages this NG

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-19 14:10:53 UTC
From: "owen.home" <owen.home@ntlworld.com>
Message-ID: <HvOF8.2120$Nh.92888@newsfep1-win.server.ntli.net>
Source record: 44133

Frank
I've been getting the same problem here and wondering if it was a problem
with my machine but you've solved it - we're both using NTL.
Time for a complaint.
John
"Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote in message
news:cVJF8.869$Nh.39175@newsfep1-win.server.ntli.net...
> Using MS Outlook Express I monitor this NG by downloading ALL NEW messages
> ONLY, removing them from my system when read.
> Up to early this month each time I did receive the NEW messages ONLY as
> specified.
> However since approx 2 weeks the system each time also downloads a few
dated
> messages which were downloaded before and subsequently read and deleted .
>
> Today 19 May 02 I again received a few messages dated 12 & 13 May I had
read
> before and deleted.
>
> Is this due to my system or do all readers of this NG have this problem?
>
> TIA for response
>
>
> Frank gm0csz.kn6wh@ntlworld.com
>
>
>
>
>
>
>
>
>
>

3592. Re: Old messages this NG

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-19 15:19:22 UTC
From: "r.crowley" <rcrowley7@xprt.net>
Message-ID: <uefgiqdfs61jb1@corp.supernews.com>
Source record: 44134

"Frank Dinger" wrote:
> >However since approx 2 weeks the system each time also downloads a few
dated
> >messages which were downloaded before and subsequently read and deleted .
> >Is this due to my system or do all readers of this NG have this problem?

"Dan Richardson" <k6mhe@arrl.net> wrote
> I don't have that problem with Agent.

I don't see it with OE either. Most likely the news server.

3593. 2m cavity reciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-19 17:05:26 UTC
From: Steve KC2GOG <kc2gog@amsat.org>
Message-ID: <qXQF8.75799$ja.19973433@news02.optonline.net>
Source record: 44135

A few days ago i came across a website that had different homebrewed radios and such. the most interesting thing i saw was a cavity tuned to two meters, and the author used it as a near field reciever. The contraption was built out of a coffee can and had a screw type device at the top to tune it. The only "electronics" was a 1N34 diode. Has anyone else seen something like this or know about this website. Its not really sensitive, the author used it to monitor his repeater. thanks in advance

steve KC2GOG

3594. Re: Old messages this NG

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-19 17:56:01 UTC
From: Ian Wade <ian.wade@netro.co.uk>
Message-ID: <yncBYxCxc+58Ewkk@netro.co.uk>
Source record: 44136

In message <cVJF8.869$Nh.39175@newsfep1-win.server.ntli.net>, Frank
Dinger <gm0csz.kn6wh@ntlworld.com> writes
>Using MS Outlook Express I monitor this NG by downloading ALL NEW messages
>ONLY, removing them from my system when read.
>Up to early this month each time I did receive the NEW messages ONLY as
>specified.
>However since approx 2 weeks the system each time also downloads a few dated
>messages which were downloaded before and subsequently read and deleted .
>
>Today 19 May 02 I again received a few messages dated 12 & 13 May I had read
>before and deleted.
>
>Is this due to my system or do all readers of this NG have this problem?

Same problem here Frank. Only I'm using Turnpike, not Outlook. And it's
not just this newsgroup, but several others as well.

But we are both using NTL......

--
73
Ian, G3NRW

Author of "NOSintro -- TCP/IP over Packet Radio"
http://www.ian.wade.care4free.net/nosintro.htm

3595. Re: 2m cavity reciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-19 18:31:04 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <IbSF8.31335$Vm2.1475293@bgtnsc04-news.ops.worldnet.att.net>
Source record: 44137

What is the web address ot this site?
"Steve KC2GOG" <kc2gog@amsat.org> wrote in message
news:qXQF8.75799$ja.19973433@news02.optonline.net...
> A few days ago i came across a website that had different
> homebrewed radios and such. the most interesting thing i saw was a cavity
> tuned to two meters, and the author used it as a near field reciever. The
> contraption was built out of a coffee can and had a screw type device at
> the top to tune it. The only "electronics" was a 1N34 diode. Has anyone
else
> seen something like this or know about this website. Its not really
> sensitive, the author used it to monitor his repeater. thanks in advance
>
> steve KC2GOG
>
>
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.360 / Virus Database: 199 - Release Date: 5/7/02

3596. Junkbox Parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-19 20:34:15 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <JRTF8.728$L4.222727@news1.iquest.net>
Source record: 44138
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

Junkbox Surplus Parts for Sale as of 05/19/2002

All prices include shipping to USA.
DX shipping is negotiated on a case by case basis.

Newer Items
============
LM78L62ACZ Volt regulators, TO92 format 5/$3.00 10/$5.00
SMT4403's - Surf Mount 2N4403 PNP's - 200/$5
9.8304 Mhz Crystals, 1/4 in tall - 25 for $7.00
27mH inductors with radial leads - 50 for $7.00

Caps - All new, old stock. No pulls.
====================================
All caps now 50/$3 or 100/$5
====================================
8pf NPO Ceramic - Loose
11pf NPO Ceramic - Loose
12pf NPO ceramics on tape
22pf Kemet Ceramic Caps, 200v, 10%
100pf Axial Mono Caps, 100v, 10%
150pf ceramics, 100v, 10%
470pf Ceramics on paper tape, rated 5% (NPO)
560pf Kemet Ceramic Caps, 200v, 10%
1000pf blue mono caps, 10% 100v
3300pf Kemet Ceramic Caps, 100v, 10%
.01 uF ceramic caps, 10% 100v brand new by Kyocera
and
.01 uF ceramic caps, 20% 50v, new old stock, not used
50/2.50 100/$4

Voltage Regulators
==================
L7805ACV voltage regulators TO220 case. 7/$4 or 15/$7
LM7812 voltage regulators. TO220 case. 5/$4
LM317T Adjust. Positive Voltage Regulator TO220. 6/$5.00 or 12/$8.50

Transistors - New Parts - No Pulls
==========
TP2222 plastic TO92 NPN (House brand 2N2222)50/$4 100/$7
2N3906's plastic TO92. PNP - 50/$4 100/$7
2N3904's plastic TO92. NPN - 50/$4 100/$7
2N3704's plastic TO92, NPN - 50/$4 100/$7

Op AMPS, Comparators
====================
LM741CN - Single Op Amp, 8 Pin Dip, 6 for $2.00
http://www.hep.ph.ic.ac.uk/~hallg/Instrumentation/Data/LM741.pdf

BA10324 - LM324 equiv Quad Ground Sense Op Amp 14 pin, 4 for $2.00
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10358 - Dual Ground Sense Op Amp, 8 pin, 5 for $4.00
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10393 - Dual Comparator 8 pin dip, 4 for $2.00
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10339 - Quad Comparator 14 pin, 4 for $2.00
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA4560 - Dual High Slew Op Amp, 4 for $2.00
http://www.rohm.com/products/databook/standard/pdf/ba4560.pdf

Diodes
======
1N4148 - You always need these. 100 for $2.50 These are NEW.

Let me know if you're interested. All prices are post paid to the
USA, unless otherwise noted. I will ship to non USA addresses but we
need to discuss the shipping charges first.

==
KB9BVN/QRP - New Whiteland IN - EM69WN
QRP-ARCI #10223 QRP-L #1540 FIST #5695
FISTS CC #764 - Proud Member ARRL
HEATH HW-9 @ 2W or NORCAL 40A @ 1.3W
INTO INFAMOUS AF4PS ATTIC DIPOLE
SOC #400 AND FLYING PIGS QRP #-57
==

3597. Re: Old messages this NG

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-19 20:45:07 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <zbUF8.34040$lv.3888897@news6-win.server.ntlworld.com>
Source record: 44139

> > >However since approx 2 weeks the system each time also downloads a few
> dated
> > >messages which were downloaded before and subsequently read and deleted
.
> > >Is this due to my system or do all readers of this NG have this
problem?
=======
> I don't see it with OE either. Most likely the news server.
==========
Thanks for the many responses on my above referred message.
Indeed it appears to be the ISP (NTLWorld) as also reported by others
If the problem continues I'll report / complain to my ISP
BTW the last 2 downloads were OK.

Tnx agn

Frank gm0csz.kn6wh@ntlworld.com

3598. FS: Power transformers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-19 22:18:09 UTC
From: Terry Perdue <k8tp@home.com>
Message-ID: <BwVF8.41291$L76.41078@rwcrnsc53>
Source record: 44140

(For anyone who tried to contact me via email by responding to the earlier post, please try again; it will work now. (Bill - your phone is off-hook.)

I have three new power transformers that would be ideal for a solid state kilowatt RF amp, high power audio amp or monster bench supply. These are real beauties, but very heavy - probably 30-35 pounds each - so shipping may be costly. Located in Seattle area. Specs are as follows:

(Primaries are the same on all three - dual 100/115V (200/230V), 50/60Hz.)

Xfmr #1:

One 55V secondary, tapped at 4V, 40V, 45V and 50V. Rated at 250A peak (6% duty cycle), using a bridge and 150,000 uF cap.

Xfmr #2:

Secondary #1: 50V, tapped at 30V, 40V and 45V. Current rating not known, but substantial.
Secondary #2: 28V center-tapped at 8A continuous, 50A peak (20% duty cycle), using a bridge and 50,000 uF cap.

Xfmr #3:

One 55V secondary, tapped at 4V, 36V, 40V, 45V and 50V. Rated at 100A peak (20% duty cycle) using bridge and 50,000 uF cap.

If interested in any of these, and able to pick up or willing to pay shipping, contact me, and we'll work an easy deal. Interested in trades. Can email pictures.

Terry Perdue
425-485-3188

3599. Cushcraft R7 / R7000 Antennas Page w / FREE downloads!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-20 03:21:53 UTC
From: Joe Martin <p166micron@yahoo.com>
Message-ID: <84894c78ff2b57f7fe3c33db76d85293.93981@mygate.mailgate.org>
Source record: 44141

Here is a very well-done Cushcraft R7 / R7000 tech page I found
with illustrations, tech tips, R7 trap drawings, R7 and R7000
instruction and assembly manuals too.

It is all free and also all downloadable. By far the very best page of
it's
kind I have ever found...

http://www.ab7sl.com/index.html?row1col2=r7.html

Joe Martin - WA5LHV

--
Posted via Mailgate.ORG Server - http://www.Mailgate.ORG

3600. Re: 2m cavity reciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-20 03:53:54 UTC
From: Kent Haase <ijeh99@mb.sympatico.ca>
Message-ID: <am_F8.2161$D77.69243@news1.mts.net>
Source record: 44142

Try http://hem.passagen.se/sm0vpo/

Kent VE4KEH

"Steve KC2GOG" <kc2gog@amsat.org> wrote in message
news:qXQF8.75799$ja.19973433@news02.optonline.net...
> A few days ago i came across a website that had different
> homebrewed radios and such. the most interesting thing i saw was a cavity
> tuned to two meters, and the author used it as a near field reciever. The
> contraption was built out of a coffee can and had a screw type device at
> the top to tune it. The only "electronics" was a 1N34 diode. Has anyone
else
> seen something like this or know about this website. Its not really
> sensitive, the author used it to monitor his repeater. thanks in advance
>
> steve KC2GOG

3601. WTB

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-20 05:44:24 UTC
From: lcramos@uol.com.br
Message-ID: <d565982e.0205192144.183b0050@posting.google.com>
Source record: 44143

I'm looking for the service manual of RS 2M HTX-242 FM transceiver $ datasheet

of HA12442V integrated circuit

thanks in advance

73s ZZ1LCT

3602. Re: 2m cavity reciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-20 06:54:24 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0205192254.74e9d68e@posting.google.com>
Source record: 44144

Hi Steve,
it was probably on Harry's Homebrew Pages, see
http://w1.859.telia.com/~u85920178/use/cavity.htm (from EU) or
http://pmp3.net/harry/use/cavity.htm (from USA)

Other URLs are obsolete !

BR from Ivan

3603. Help: WaveGuide filter design (WEFILTER.BAS)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-20 11:10:11 UTC
From: HaeWoon Lee <heti@soback.kornet.net>
Message-ID: <acakkbdnc1@news1.kornet.net>
Source record: 44145
Cross-posted to: rec.radio.amateur.homebrew,alt.ham-radio.vhf-uhf

Hello,

I heard that there is a SW name called "WEFILTER.BAS", a wave guide filter design s/w, if anyone know how can I acquire this s/w for my own copy please let me know.

Thanks, 73 & 88!!
DE HL1AYJ
heti@soback.kornet.net

3604. Re: 2m cavity reciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-20 12:17:05 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0205200417.46e36394@posting.google.com>
Source record: 44146

"Steve KC2GOG" <kc2gog@amsat.org> wrote in message
news:<qXQF8.75799$ja.19973433@news02.optonline.net>...
> A few days ago i came across a website that had different
> homebrewed radios and such. the most interesting thing i saw was a cavity
> tuned to two meters, and the author used it as a near field reciever. The
> contraption was built out of a coffee can and had a screw type device at
> the top to tune it. The only "electronics" was a 1N34 diode. Has anyone else
> seen something like this or know about this website. Its not really
> sensitive, the author used it to monitor his repeater. thanks in advance
>
> steve KC2GOG

This is nothing but a crystal diode receiver built for 2 meters.

Jim
N8EE

3605. Re: WTB

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-20 12:17:14 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3CE8E94A.20905@charter.net>
Source record: 44047

http://www.radioshack.com/ProdSupport/DocumentDetail/DocumentDetailIndex.asp?P=support_electronics&D=3157&T=htm
try this link.

L. RAMOS wrote:

> I'm looking for the service manual of RS 2M HTX-242 FM transceiver $ datasheet
>
> of HA12442V integrated circuit
>
> thanks in advance
>
> 73s ZZ1LCT
>

--
NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

3606. WTB:HW-16 Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-20 13:54:46 UTC
From: Handi Ham <okiemansc@yahoo.com>
Message-ID: <Ge7G8.770$jA6.370@newsread2.prod.itd.earthlink.net>
Source record: 44048
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

I am looking especially for an HW-16 basket case or project.Will consider other greenies.I have just come home from the hospital after my 3rd major surgery in the last 6 months and have a long recovery time so I am interested in projects that take more time than money.
THANKS,
...KC0EH...OKLAHOMA...

3607. Minimum Loss Pad

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-20 18:43:35 UTC
From: la8ak.xnd@online.no
Message-ID: <3ce93c96.425755382@news.online.no>
Source record: 44049

Have to measure RF transformer losses, but my measuring apparatus have different impedance, so I need a minimum loss pad. But unfortunately I cannot find where I have seen the construction (thought I had lot of copies a few years ago!).

Would be pleased if somebody could tell me the formula to calculate resistor values and attenuation. In the actual case I am testing 50ohm unbalanced to 200ohm balanced, or 75 to 300 ohm, and need a pad between 200 and 120 ohm balanced, and between 300 and 120 ohm.

hope to hr fm u sn

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

3608. Re: 2m cavity reciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-20 19:37:28 UTC
From: k7itm@aol.com
Message-ID: <3200347.0205201137.50305161@posting.google.com>
Source record: 44050

I don't know about the particular project you've been looking at, but
can relate my own experiences. It sounds like the project you looked
at may be using the coffee can as an antenna as well as a resonator;
you didn't mention if there's a connector/lead from an external
antenna or not.

Anyway, the design I've played with is a resonator...typically a
helical resonator a bit more than an inch in diameter...with the
signal coupled lightly in at the bottom, to maintain high loaded Q.
The detector taps up quite a ways, and so long as the signal level is
low, the detector presents a high enough resistive component of load
that the Q remains high. I'll normally send the detected signal off
to a chopper-stabilized amplifier with very low input bias current,
arranged as a log amp, but the Analog Devices log RF detector ICs
should work, too, instead of the diode detector. I've been using an
Agilent zero-bias Schottky detector diode, and can see input signals
down in the few-mircovolt range with it. Then the high Q of the
resonator becomes important, so you don't "listen to" a whole bunch of
stations all at once. Two coupled resonators helps even more...it's
feasible to get loaded Q's of around 1000, maybe a bit more, so you
can have bandwidths less than 100kHz. That's not exactly "narrowband"
but a lot better than something several MHz wide. It's interesting to
note that with isotropic transmitting and receiving antennas in space,
with a 5-watt 2-meter transmitter, you get 50 microvolts in 50 ohms at
just over 50 kilometers...and I can definitely "see" 50 microvolts of
RF with this sort of setup.

BTW, what are you looking to accomplish?

Cheers,
Tom

"Steve KC2GOG" <kc2gog@amsat.org> wrote in message
news:<qXQF8.75799$ja.19973433@news02.optonline.net>...
> A few days ago i came across a website that had different
> homebrewed radios and such. the most interesting thing i saw was a cavity
> tuned to two meters, and the author used it as a near field reciever. The
> contraption was built out of a coffee can and had a screw type device at
> the top to tune it. The only "electronics" was a 1N34 diode. Has anyone else
> seen something like this or know about this website. Its not really
> sensitive, the author used it to monitor his repeater. thanks in advance
>
> steve KC2GOG

3609. Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-20 19:46:35 UTC
From: deryck lant <deryck@deryck.com>
Message-ID: <20020520204635708l4@deryck.com>
Source record: 44051
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

Scientists on tropical island using found materials. Also kite. Should be stimulating entertainment with Kate Humble supervising. Spark tx should be ok, but how about the crystal for rx?

G0KOR

3610. Re: Minimum Loss Pad

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-20 20:28:29 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <acbm9dstb1@knossos.btinternet.com>
Source record: 44052

Program MATCHPAD will calculate a minimum loss matching pad.

Download in a few seconds as usual. ;o)

$$$$$$$$$$$$$$$$$$$$$$$$$
Regards from Reg G4FGQ
Free Radio Modelling Software
Go to http://www.g4fgq.com
$$$$$$$$$$$$$$$$$$$$$$$$$

J M Noeding <la8ak.xnd@online.no> wrote in message
news:3ce93c96.425755382@news.online.no...
> Have to measure RF transformer losses, but my measuring apparatus have
> different impedance, so I need a minimum loss pad. But unfortunately I
> cannot find where I have seen the construction (thought I had lot of
> copies a few years ago!).
>
> Would be pleased if somebody could tell me the formula to calculate
> resistor values and attenuation. In the actual case I am testing 50ohm
> unbalanced to 200ohm balanced, or 75 to 300 ohm, and need a pad
> between 200 and 120 ohm balanced, and between 300 and 120 ohm.
>
> hope to hr fm u sn
>
> 73
> Jan-Martin
> LA8AK
> --
> remove ,xnd to reply

3611. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-20 20:53:57 UTC
From: lucifer@eternal-flames.gov
Message-ID: <3ce96204.3438108@news.btinternet.com>
Source record: 44053
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

On Mon, 20 May 2002 20:46:35 +0100, deryck lant <deryck@deryck.com>
wrote:

>Scientists on tropical island using found materials. Also kite. Should be
>stimulating entertainment with Kate Humble supervising. Spark tx should be
>ok, but how about the crystal for rx?

Not as difficult as it sounds... Try a decent silica-based
valve-grinding paste.

3612. Re: Minimum Loss Pad

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-20 23:27:20 UTC
From: la8ak.xnd@online.no
Message-ID: <3ce98504.444299987@news.online.no>
Source record: 44054

On Mon, 20 May 2002 20:28:29 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>Program MATCHPAD will calculate a minimum loss matching pad.
>
>Download in a few seconds as usual. ;o)

| Program name: MATCHPAD.exe Author: R.J.Edwards G4FGQ (C) 6th May 2000
|
| DESIGN OF RESISTIVE MATCHING-PADS & ATTENUATORS
|
| An assymetrical 3-resistor T or Pi network has input and output image imped-
| ances I1 and I2 respectively. When the output is terminated with its image I2
| the input impedance is I1, and vice-versa. For an ordinary symetrical atten-
| uator both I1 and I2 are equal to the pad's characteristic impedance, Zo.
|
| When I1 is equal to a source resistance and I2 is equal to a load resistance
|an impedance match occurs simultaneously at both input and output terminals.
|If such a condition exists the loss due to the matchpad in dBs cannot be less
|than the minimum value determined in a complicated manner by the ratio I1/I2.

| A pad so designed is known as a minimum-loss matching pad. A resistor in the
|T-network becomes a short circuit. A resistor in the Pi-network becomes open circuit.
|Both T and Pi reduce to the same minimum-loss L-section. All designs for matching
|pads with attenuation less than the minimum result in some comp-
| onents having non-realisable negative resistance values.

| This program computes the mismatch loss without a matching pad relative to
|maximum power available when load ohms = source ohms, the minimum matched
|loss for given values of source and load, and T and Pi-pad resistor values.

Yes, but when it is requested to enter
source impedance
terminating impedance
and attenuation

I don't know the attenuation, it is what I wish to calculate, tried
some different figures and got result with negative resistances

73
Jan-Martin
--
remove ,xnd to reply

3613. N6WWW Home Page

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-20 23:28:25 UTC
From: Neon Moon <neonmoonx@hotmail.com>
Message-ID: <tEfG8.10824$zV.61875@sccrnsc02>
Source record: 44055
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur,rec.radio.amateur.homebrew

I actually posted this in a reply message in a thread, but thought I'd make a more general announcement as an invitation to everyone.

I just finished my first ham radio page. Pretty simple stuff, but some nice links to some of my favorite QRP and Homebew sites amongst other stuff (a ULS link, and some other good ham radio pages on CW). Included also is a bit of my ham history (i'm a new ham, so it's a short history! LOL)

Let me know what you think!

Jason - N6WWW - November Six World Wide Web

And for those on IRLP, you can catch me on Node 396

(I'm actually monitoring right now for those hanging out online
It's 4:25pm Pacific 5/20/02 right now)

3614. Return of the Windom

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 03:34:32 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <accf88$76p$4@knossos.btinternet.com>
Source record: 44056

New Program: WINDOM2.exe

The original Windom (1929) antenna has now fallen into the antique category. It is a simple 1/2-wave horizontal dipole fed over a single-wire transmission line of no particular length except that it has to come down near to ground level to be fed against ground just like all ground-mounted verticals. The trick of using a single wire feedline is made possible by tapping the line into the dipole at a short distance off-centre.

By tapping at the right place the vertical feedline can be approximately Zo-matched. The SWR can be reduced to 1:1 yet the feedline will still radiate. But since this fills in the nulls in the dipole's radiation pattern it will always be welcome.

As just described it was originally used as a one-frequency antenna. The main reason being that in the early days transmitters were capable of transmitting on only one frequency. It might have had something to do with steam-driven LF alternators.

However, in these days of tubes and transistors, it turns out the Windom is a multi-function, multi-frequency, multi-band antenna. Provided its height plus the length of the longest 'half' of the dipole is longer than about 1/6th wavelength at the lowest frequency of operation it has a consistently high radiating efficiency.

Its relative high base feedpoint resistance means that a very extensive gound electrode system is not necessary. But for multi-band operation a matching network is always needed. The program calculates the L and C values of an L-matching network. When a single series tuning component is all that's needed the program calculates that too. The loss in the L-network is taken into account when calculating overall efficiency. A coil Q of 200 is assumed.

A table of loss resistance values of the ground connection for various numbers and lengths of radials is included in the notes.

The antenna can be changed from Inverted-L, to Dipole, then to a T-antenna by lowering the dipole and sliding the tap along the wire. This will change input impedances and radiation patterns. Scope for experiments?

This deceptively simple antenna deserves greater interest and popularity - for both novices and old timers.

Download program WINDOM2 in a few seconds. See what makes it tick. About 51 K-bytes. No unzipping inconvenience.

==========

Regards from Reg G4FGQ
Free Radio Modelling Software
Go to http://www.g4fgq.com
==========

3615. Re: Minimum Loss Pad

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 04:37:59 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <acciv6imd1@helle.btinternet.com>
Source record: 44057

(1) Enter source resistance.
(2) Enter load resistance.
(3) Initially enter any number of dBs you fancy.

A MESSAGE APPEARS ON THE SCREEN WHICH TELLS YOU WHAT THE MINIMUM LOSS
ACTUALLY IS BETWEEN THESE TWO RESISTORS.

For 50 and 150 ohms is it 9.9 dB ? (I forget)

(4) You then enter the value of the (minimum) loss back into the program
and it will tell you the values of the TWO resistors which make up the T and
Pi minimum loss pads.

The trouble is, if you don't know to work it out from first principles with
pencil and paper, its very dangerous to try using a computer. ;o)

OK ?

Yours Reg.

J M Noeding <la8ak.xnd@online.no> wrote in message
news:3ce98504.444299987@news.online.no...
> On Mon, 20 May 2002 20:28:29 +0000 (UTC), "Reg Edwards"
> <g4fgq.regp@btinternet.com> wrote:
>
> >Program MATCHPAD will calculate a minimum loss matching pad.
> >
> >Download in a few seconds as usual. ;o)
>
> | Program name: MATCHPAD.exe Author: R.J.Edwards G4FGQ (C) 6th
May 2000
> |
> | DESIGN OF RESISTIVE MATCHING-PADS & ATTENUATORS
> |
> | An assymetrical 3-resistor T or Pi network has input and output image
imped-
> | ances I1 and I2 respectively. When the output is terminated with its
image I2
> | the input impedance is I1, and vice-versa. For an ordinary symetrical
atten-
> | uator both I1 and I2 are equal to the pad's characteristic impedance,
Zo.
> |
> | When I1 is equal to a source resistance and I2 is equal to a load
resistance
> |an impedance match occurs simultaneously at both input and output

terminals.
> |If such a condition exists the loss due to the matchpad in dBs cannot be
less
> |than the minimum value determined in a complicated manner by the ratio
I1/I2.
>
> | A pad so designed is known as a minimum-loss matching pad. A resistor in
the
> |T-network becomes a short circuit. A resistor in the Pi-network becomes
open circuit.
> |Both T and Pi reduce to the same minimum-loss L-section. All designs for
matching
> |pads with attenuation less than the minimum result in some comp-
> | onents having non-realisable negative resistance values.
>
> | This program computes the mismatch loss without a matching pad relative
to
> |maximum power available when load ohms = source ohms, the minimum
matched
> |loss for given values of source and load, and T and Pi-pad resistor
values.
>
>
> Yes, but when it is requested to enter
> source impedance
> terminating impedance
> and attenuation
>
> I don't know the attenuation, it is what I wish to calculate, tried
> some different figures and got result with negative resistances
>
> 73
> Jan-Martin
> --
> remove ,xnd to reply

3616. Re: Help: WaveGuide filter design (WEFILTER.BAS)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 07:14:13 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0205202314.1f38be6f@posting.google.com>
Source record: 44058
Cross-posted to: rec.radio.amateur.homebrew,alt.ham-radio.vhf-uhf

Hi,
I found something about the WEFILTER program at
http://www.qsl.net/k6ljm/exvwgf.htm - sorry, no download there. If you
find the program itself, drop a message, please - I am also interested
in it.
If you are interested in microstrip bandpass filter design, don't
forget to look at http://mujweb.cz/www/ok1sip/english/grebeh.htm

BR from Ivan

P.S. Remove remove_ when sending a mail.

3617. Re: Terminating HC4066 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 08:54:12 UTC
From: Markus Wolfgart <markus.wolfgart@xx_dlr.de>
Message-ID: <3CEA0B34.42215F61@xx_dlr.de>
Source record: 44059

Many thanks for this info Harold.
Would like to make my own experience, but by the way
did you ever try a DDS IC for the LO for example
the ad9854 (10bit DAC). This chip provide tow outputs,
one for I and one for Q channel.
I was told, that it's not so easy to make the low pass
filter following the DDS IC to reduce the frequencies
above clock/2 when taking the phase into account especially
when trying to construct a I&Q-DC-Rx. But this is another story.

Markus

DL8MBY

--

==========

Markus Wolfgart

DLR

==========
PS.: remove the xx_ from email adr. to replay
==========

"Harold E. Johnson" schrieb:
>
> "Markus Wolfgart"
> > Hallo Harold and the world,
> >
> > is such a switch ic suitable for qrp (means power consumption)
> > and also suitable for direct conversion to audio by a pair of
> > this ic (I and Q chanal) to avoid the sideband filter?
> > Have anybody made experience with this technique?
>
> I don't know the power consumption. Not being green or into QRP, I've never
> measured it. My board layout includes 3 digital 74AC IC's in a variable
> divider chain and all 4 chips draw 60-100 mA at 5 volts, depending on LO
> frequency. (110 mA at 150 MHz, about the upper limit of AC logic). I use the
> 3125 for RF mixing to an RF IF frequency. I have used the FST 3253 (Only
> takes one for both I and Q) in my construct of Rod Greens Bedford receiver.
> As far as either of us know, it was the first one built. (After his, and his
> great article in QEX) Works fine. I use the Burr Brown INA 103 op-amp
> amplifiers post detection ahead of the phasing networks.
> >
> > Would be great to get some hints what to pay attention for when

> > designing such a rx.
>
> Layout Symmetry!!! And square wave LO. And a steady hand if using the TSSOP
> package with it's 0.025 leads!
>
> W4ZCB
> >

3618. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 10:40:25 UTC
From: Richard <g3cwi@*no-spam-diddly-do*tesco.net>
Message-ID: <acd86r$rt4$1@newsg3.svr.pol.co.uk>
Source record: 44060
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

This seems most unfair. I have been building TXs and RXs in the kitchen for years and Kate Humble has never once been in touch to see how I'm getting on.

73

"deryck lant" <deryck@deryck.com> wrote in message news:20020520204635708 14@deryck.com...
> Scientists on tropical island using found materials. Also kite. Should be
> stimulating entertainment with Kate Humble supervising. Spark tx should be
> ok, but how about the crystal for rx?
>
> G0KOR

3619. Re: Terminating HC4066 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 11:46:14 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <asqG8.70321$UV4.102685@rwcrnsc54>
Source record: 44061

> Would like to make my own experience, but by the way
> did you ever try a DDS IC for the LO for example
> the ad9854 (10bit DAC). This chip provide tow outputs,
> one for I and one for Q channel.
> I was told, that it's not so easy to make the low pass
> filter following the DDS IC to reduce the frequencies
> above clock/2 when taking the phase into account especially
> when trying to construct a I&Q-DC-Rx. But this is another story.
>
> Markus

I've used a pair of 9851's (Without the 6X PLL, too much jitter in that for the application) in a VNA. Fine for that purpose, but I wouldn't want to use a straight DDS for a LO without PLLing it to a VCO to kill the spurs. I sure wouldn't want my neighbor at the foot of the hill to be using one at any power level above a watt or two, his phase noise at a couple hundred KHz is bad enough now.

You can make a perfect quadrature output with a pair of 7474's, but it cuts the frequency by four. If you can live with that, it doesn't do a lot for the spurs, but cuts any LO phase noise by 12 dB. You get automatic high level (~+17) dBm square wave LO out of them as well.

W4ZCB

3620. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 12:05:40 UTC
From: PJML <pjml@nerc.ac.uk.loopback>
Message-ID: <3CEA3814.B3642E82@nerc.ac.uk.loopback>
Source record: 44063
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

adamory wrote:
>
> I seem to remember somewhere that English POW's in Japan and the far east
> made radio receivers using basic things they found - they did something with
> eggshells and tin foil too - needs some further research, but apparently it
> did work.

http://www.e-bannerx.com/pages/Recreation/Antiques/Radio/FAQs__Help__and_Tutorials/Foxhole
/

is worth a look.

//PJML//

3621. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 12:06:50 UTC
From: adamory <adamory@ntlworld.com>
Message-ID: <CIqG8.3207$7M3.965594@news11-gui.server.ntli.net>
Source record: 44062
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

I seem to remember somewhere that English POW's in Japan and the far east made radio receivers using basic things they found - they did something with eggshells and tin foil too - needs some further research, but apparently it did work.

73

Adam

"deryck lant" <deryck@deryck.com> wrote in message news:20020520204635708l4@deryck.com...
> Scientists on tropical island using found materials. Also kite. Should be
> stimulating entertainment with Kate Humble supervising. Spark tx should be
> ok, but how about the crystal for rx?
>
> G0KOR

3622. Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 12:16:34 UTC
From: Brian <lea1bri@optusnet.com.au>
Message-ID: <3cea3a54$0$4691$afc38c87@news.optusnet.com.au>
Source record: 44065
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

I don't know if anyone has seen the website I'm looking for (I hope they have), but I've lost the link so I cant give it to anyone either.
Hoping someone can help me with the web address.

The website is about a bloke in America (maybe Canada I can't remember). He is an amateur that lives in a zone where the power delivery isn't fantastic. To combat this he set up a car battery in a battery box with a volt meter and a cigarette lighter socket built in (as well as big posts for his radio equipment). Apparently this wasn't good enough so he linked up a solar system to it as well. There were a couple of other attachments also.

Hoping someone can help me out with the address for it.

Thanks in advance,

Brian.
Sydney Australia.

3623. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 13:09:43 UTC
From: rcnixon@mindspring.com
Message-ID: <3cea451b.2496549@news.mindspring.com>
Source record: 44066
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

"Brian" <lea1bri@optusnet.com.au> wrote:

>I don't know if anyone has seen the website I'm looking for (I hope they
>have), but I've lost the link so I cant give it to anyone either.
>Hoping someone can help me with the web address.
>
>The website is about a bloke in America (maybe Canada I can't remember). He
>is an amateur that lives in a zone where the power delivery isn't fantastic.
>To combat this he set up a car battery in a battery box with a volt meter
>and a cigarette lighter socket built in (as well as big posts for his radio
>equipment). Apparently this wasn't good enough so he linked up a solar
>system to it as well. There were a couple of other attachments also.
>
>Hoping someone can help me out with the address for it.
>
>Thanks in advance,
>
>Brian.
>Sydney Australia.

Brian, you would be better off using a battery made for supplying a relatively small amount of current for a longer time. A car battery is optimized to supply a huge amount of current (100 to 200 amps) for a short time in order to turn the starter motor. When the car is running, its electrical needs are supplied by the alternator powered by the engine. Gel cells are really what you want. They are sold for computer room uninterruptable power supplies (UPS) and camper vehicle use. Perhaps you can get them from a computer service company or just buy a couple of new ones. The gel cell have a charging power requirement similar to Nimh batteries and the charge control chips for Nimhs work well for gel cells. Do a web search for "gel cells" and you will get all you need! Also, do a web search for "Luke Enriquez". He is an Australian ham and engineer who has a nice design for a gel cell maintenance system.

Russ
"Two-fifteen, no ambulance needed!"
Subtract all nines to reply

3624. FA Collins test set

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 14:32:09 UTC
From: "Ronald J. Wicker" <ronwick@ev1.net>
Message-ID: <3cea3dbf$1_1@newsa.ev1.net>
Source record: 44064
Cross-posted to:
rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

Collins Radio Company, Test Set, Model TS-1956-URC. This test set appears to be designed for adjusting the 70-k3 and 70-k5 oscillators. Appears to be in very clean shape. Round emblem, serial number 72A. Item sold as is no warranty. Buyer to pay actual shipping charges.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1353278759&ssPageName=ADME:B:LC:US:1

3625. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 14:47:09 UTC
From: ronayling@hotmail.com
Message-ID: <3ceb5d74.29839608@news.freeserve.co.uk>
Source record: 44067
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

I could think of lots of other things to do on a desert Island
with Kate, and it wouldn't be fiddling with bits of wire, though
flying her kite has got possibilities!!

On Mon, 20 May 2002 20:46:35 +0100, deryck lant <deryck@deryck.com>
wrote:

>Scientists on tropical island using found materials. Also kite. Should be
>stimulating entertainment with Kate Humble supervising. Spark tx should be
>ok, but how about the crystal for rx?
>
>G0KOR

3626. Info: program a Moto People Finder, basics..?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 15:46:56 UTC
From: Skipp <skipp@pilot.ucdavis.edu>
Message-ID: <acdq5g$9t4$1@woodrow.ucdavis.edu>
Source record: 44086
Cross-posted to: rec.radio.swap,rec.radio.amateur.swap,rec.radio.amateur.homebrew

Hi there,

If you've programmed a Motorola People Finder in the past and can remember some of the basics, I'd like to pick your brain with some questions.

I have an NOS unit here (purchased second hand), with most of the information. The internal radio is a modified GP-300 rf package on a board. I'd like to ask some programming questions about it.

I'd also like to know if you've used an Alpha Mate with it and or the external VDT or smart term. I'm setting up a basic paging system and hope this unit will work for my needs.

I have what I think is all the proper software and connections... I might have a question or two about the various programs you might have used.

thanks much
skipp
skipp@pilot.ucdavis.edu

Please, no spam or unsolicited Emails... thank you

3627. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 15:49:49 UTC
From: Rick Manns <nospamrjmanns@kuentos.guam.netnospam>
Message-ID: <x0uG8.505$vhi2.28311765@news2.randori.com>
Source record: 44068
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

Brian,

I don't know about the link you are looking for, but the company I work for sells the item(s) you looking for. Go to http://www.solcomguam.com

Good luck with your battery project.

Rick - KB6IDK/KH2

"Brian" <lea1bri@optusnet.com.au> wrote in message news:3cea3a54$0$4691$afc38c87@news.optusnet.com.au...
> I don't know if anyone has seen the website I'm looking for (I hope they
> have), but I've lost the link so I cant give it to anyone either.
> Hoping someone can help me with the web address.
>
> The website is about a bloke in America (maybe Canada I can't remember).
He
> is an amateur that lives in a zone where the power delivery isn't
fantastic.
> To combat this he set up a car battery in a battery box with a volt meter
> and a cigarette lighter socket built in (as well as big posts for his
radio
> equipment). Apparently this wasn't good enough so he linked up a solar
> system to it as well. There were a couple of other attachments also.
>
> Hoping someone can help me out with the address for it.
>
> Thanks in advance,
>
> Brian.
> Sydney Australia.
>
>
>

3628. Re: Cushcraft R7 / R7000 Antennas Page w / FREE downloads!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 15:54:14 UTC
From: John Tait <bravo@iol.ie>
Message-ID: <G4uG8.7426$04.21237@news.iol.ie>
Source record: 44069

"Joe Martin" <p166micron@yahoo.com> wrote in message
news:84894c78ff2b57f7fe3c33db76d85293.93981@mygate.mailgate.org...
> Here is a very well-done Cushcraft R7 / R7000 tech page I found
> with illustrations, tech tips, R7 trap drawings, R7 and R7000
> instruction and assembly manuals too.
>
> It is all free and also all downloadable. By far the very best page of
> it's
> kind I have ever found...

Oops!! Here we go again... The info on that page was stolen from my page at
http://www.iol.ie/~bravo/

73
John EI7BA

3629. Re: Terminating HC4066 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 16:09:52 UTC
From: Markus Wolfgart <markus.wolfgart@xx_dlr.de>
Message-ID: <3CEA7150.6453A287@xx_dlr.de>
Source record: 44070

Hallo Harold,

I have read some articles in the German ham magazine Funkamateur
about this concept with the pair of 2xD-FF (74x74) for generating
clock for a 74HCT4066 Mixer for a I and Q channel DC-RX.
I have made some scanned copies, if you are keen on it, I can
mail them as a attachment to you.
In the case someone use a DDS like the AD9854/9857 for the switching
of the 4066 he avoid it to make different LO's with four times higher
frequencies for the different sw-bands.
When using the ad9854/57 you get a better phase noise (about 80 dB SFDR)
because of the 12/14bit DAC.
When someone avoid to use the internal multiplier of the DDS chip like
you
mentioned before and take a stable oscillator for clocking the DDS he
could
achieve a good performance over a wide range of frequencies.
I have not tried it before but this will be may next fovored project in
the future.

73 & gd dx

Markus

DL8MBY

==========

Markus Wolfgart

DLR

==========
PS.: remove the xx_ from email adr. to replay
==========

3630. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 17:32:57 UTC
From: gareth@lightfox.demon.co.uk
Message-ID: <20020521.173257.85@lightfox.demon.co.uk>
Source record: 44071
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

In article <CIqG8.3207$7M3.965594@news11-gui.server.ntli.net>,
adamory@ntlworld.com ("adamory") wrote:

> I seem to remember somewhere that English POW's in Japan and the
> far east made radio receivers using basic things they found

The late Tom Douglas who held the call G3BA was a Prisoner of the Japs.
He fashioned a makeshift 'crystal' receiver - IIRC a razor blade was
one of the principal components.

73, G.

--
http://www.rat.org.uk/

3631. Re: Minimum Loss Pad

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 18:06:41 UTC
From: la8ak.xnd@online.no
Message-ID: <3cea887b.7950904@news.online.no>
Source record: 44072

On Tue, 21 May 2002 04:37:59 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>(1) Enter source resistance.
>(2) Enter load resistance.
>(3) Initially enter any number of dBs you fancy.
>
>A MESSAGE APPEARS ON THE SCREEN WHICH TELLS YOU WHAT THE MINIMUM LOSS
>ACTUALLY IS BETWEEN THESE TWO RESISTORS.
>
>For 50 and 150 ohms is it 9.9 dB ? (I forget)
>
>(4) You then enter the value of the (minimum) loss back into the program
>and it will tell you the values of the TWO resistors which make up the T and
>Pi minimum loss pads.
>
>The trouble is, if you don't know to work it out from first principles with
>pencil and paper, its very dangerous to try using a computer. ;o)
>
>OK ?
>----
S. Source resistance, ohms .. 200.0
L. Load resistance, ohms 120.0
A. Attenuation, decibels 6.48

T-MATCHING PAD Pi-MATCHING PAD

126.49 -0.00 126.49
o---$$$$$$----*----$$$$$$---o
o----*-----$$$$$$-----*----o

$ $ $
From $ To $ $
To
Source 189.74 Load 999999999.99
189.74 Load
$ $ $

o------------*------------o
o----*---------------*----o

Loss of load power due to mismatch when matching pad is omitted
0.28 dB
Minimum loss when both source and load are matched by a pad
6.48 dB

The above resistor values are for minimum loss pads.
Keys 1,2 slowly vary attenuation. Keys 3,4 are faster. M(inimum
loss pad).
Hit keys S,L,A or M to change data. B(egin again) or Q(uit
program) ...

Sorry, I didn't see the M-key late at night, now works fb, OM!

73
Jan-Martin
--
remove ,xnd to reply

3632. Re: Minimum Loss Pad

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 18:55:13 UTC
From: k7itm@aol.com
Message-ID: <3200347.0205211055.160144bf@posting.google.com>
Source record: 44073

Hi Jan-Martin,

Reg suggests his program, them cautions that it would be good to know how to work it out yourself before trusting the computer. To that end, consider that, for example, to go between 200 ohms and 120 ohms, (or Rhigh and Rlow in general) you need a series resistor (say Rseries) between the two, and a shunt resistor across the Rlow side (say Rshunt). (For balanced, you just split the Rseries into two, one on each side, of course.) Then you set up two equations to solve for Rseries and Rshunt:
Rhigh = Rseries + (Rlow||Rshunt)
Rlow = Rshunt || (Rseries+Rhigh)
The algebraic manipulations to reduce those to something you can plug Rhigh and Rlow into to solve for Rshunt and then Rseries are a bit tedious, but not really difficult. Note that you can solve the first for Rseries, and then plug that into the second, so it becomes a single equation in one unknown; it is, however, (a very simple) quadratic. From the resistor values which result, the attenuation should be apparent, I think. (Just a voltage divider of Rseries and (Rhigh-Rseries) going one way, and an equivalent current divider going the other.) (As a check, it looks like -8.6938dB to me, for the 200:120 case, -12.9408dB for the 300:120 case.)

Cheers,
Tom

la8ak.xnd@online.no (J M Noeding) wrote in message news:<3ce93c96.425755382@news.online.no>...
> Have to measure RF transformer losses, but my measuring apparatus have
> different impedance, so I need a minimum loss pad. But unfortunately I
> cannot find where I have seen the construction (thought I had lot of
> copies a few years ago!).
>
> Would be pleased if somebody could tell me the formula to calculate
> resistor values and attenuation. In the actual case I am testing 50ohm
> unbalanced to 200ohm balanced, or 75 to 300 ohm, and need a pad
> between 200 and 120 ohm balanced, and between 300 and 120 ohm.
>
> hope to hr fm u sn
>
> 73
> Jan-Martin
> LA8AK

3633. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 19:22:35 UTC
From: g8aso@hotmail.com
Message-ID: <3d538e03.0205211122.6c678408@posting.google.com>
Source record: 44074
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

deryck lant <deryck@deryck.com> wrote in message news:<20020520204635708l4@deryck.com>...
> Scientists on tropical island using found materials. Also kite. Should be
> stimulating entertainment with Kate Humble supervising. Spark tx should be
> ok, but how about the crystal for rx?
>
> G0KOR

It's a load of bollox and was shown last year anyway!

3634. two tone generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 19:52:44 UTC
From: "J.F. FOURCADIER" <jf.fourcadierNO@SPAMwanadoo.fr>
Message-ID: <ace8ch$og0$1@wanadoo.fr>
Source record: 44075

A two tone generator to check the linearity of video equipments:

http://perso.wanadoo.fr/jf.fourcadier/index_e.htm

--

73 et B5+ de Jean-Fran&#65533;ois FOURCADIER F4DAY

website: http://perso.wanadoo.fr/jf.fourcadier

3635. Re: Terminating HC4066 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 20:40:26 UTC
From: la8ak.xnd@online.no
Message-ID: <3ceaae4a.17631392@news.online.no>
Source record: 44076

On Sat, 11 May 2002 03:17:13 GMT, Steve Ratzlaff <sratzlaf@flash.net>
wrote:

>Hi,
>My experiments were with 5 and 6volts, VCC on the IC; I didn't try
>12volts. Performance was somewhat improved (better IMD) with 6 volts, so
>I would assume significantly better at 12VCC. That is a huge max input
>signal you're expecting. A high-level DBM (+23dBM LO) would be straining
>to stay linear with such a large input. I would guess this IC mixer will
>not be linear with such a large input, but perhaps your application is
>not as a receiving mixer but as a transmitting mixer, where strict
>linearity may not need to be as desirable.

in my circuit CD4069UBE draws only 10mA. I wasn't sure how much
voltage was safe to use with such inverter in linear mode, so I
reduced the voltage with a 220 ohm resistor from 12V. Suppose it is
the first limiter which draw current and the next two inverter stages
of CD4069UBEand HC4066 draw very little current, so I really don't
understand the 23dBm LO level you mention.. LO frequency is 196kHz

73,
LA8AK
--
remove ,xnd to reply

3636. FS: RS 242 WW2 German power triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 20:57:00 UTC
From: arnoldg@c2i.net
Message-ID: <3ceab478.1702712@news1.c2i.net>
Source record: 44077

Hello,

I have several of this antique globe shape German triode in stock. It is directly heated, an European 4-pin base and about 12W anode dissipation. The heater is 3.8V 0.72A, u=17, S = 3.0mA/V Max. anode voltage is 400V.The valves are NOS, but the boxes are mostly in bad shape. You will find a picture at my web site. www.demostenes.no
Just search for RS 242.
Please contact me if you are interested.

Regards,

Arnold Goks�yr
DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267
http://www.demostenes.no

Thousands of different valves in stock as well as sockets,transformers,books,caps,resistors and other components. Web site is updated every week. You can order on-line.

3637. FS: Old Radio Books

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 21:53:51 UTC
From: oldbooks78@aol.com
Message-ID: <20020521175351.20039.00000159@mb-mv.aol.com>
Source record: 44078

I currently have for sale a variety of older radio-related books. Postage is $2 for the first book, and $1 for each additional item (Media Mail within the US, at cost elsewhere). The books are:

"The Radio Amateur's Handbook, The Standard Manual of Amateur Radio Communication" 47th Edition, published by the American Radio Relay League, 1970. The 600+ page softbound book is in good condition. There is a 4 inch tear along the rear cover spine, and a few bent page tips, and a brown magic marker smudge on the page ends. Internals are clean with no page tears or pen marks, and a strong binding. A good vintage reading copy. Available for $6.

Terman, Frederick Emmons "Radio Engineering" published by McGraw-Hill, 1947. Third edition. The 969 page hardbound book is in very good condition, clean with no page tears or pen marks except for a previous owners name and address inside the front cover. Strong binding and very clean covers. A thorough treatment of radio and communications including ultra-high-frequency and microwave techniques. A very nice copy. Available for $15.

"Reference Data for Radio Engineers" Second Edition, published by the Federal Telephone and Radio Corporation in 1947. The 322 page hardbound book is in good+ condition. Clean with no page tears or pen marks except for a previous owners name and address inside the front cover. "The present edition has been greatly enlarged and a subject index included. Chapters on transformers and room acoutics have been added. The material on radio propagatiion and radio noise has been revised. The data on cathode-ray tubes have been considerably expanded." Available for $9.

Everitt, William Littell "Communication Engineering" published by McGraw-Hill, 1937. The 727 page hardbound book is in about very good condition. Clean with no page tears or pen marks except for a previous owners name and address inside the front cover, and a few passages underlined in pencil. A nice early text on the science of the radio. Available for $9.

Measurements Development Laboratory of the Sperry Gyroscope Company, "Microwave Transmission Design Data" published by the Sperry Gyroscope Company, 1944. Publication No. 23-80. The 215 page hardbound book is in very good condition, clean with no page tears or pen marks, and a strong binding. Originally issued during WWII as a "confidential" document. Chapter topics include General formulae for concentric lines; Attenuation in concentric lines; Reflections and impedance matching; General formulae for wave guides; Attenuation in wave guides; Reflections and impedance matching in wave guides; Wave guide tees and bends; Wave guides filled with dielectric material; Dielectric material: Cavity resonators; and Measurement techniques. A neat early book on ultra-high frequency radio waves. Available for $7.

Massey, H.S.W. and R.L.F. Boyd "The Upper Atmosphere" published by Hutchinson of London, 1958. The 333 page hardbound book is in good+ condition. It is an ex-library copy from a corporate library, with a card pouch inside the rear cover, and the usual stamps and stickers. The rear inside hinge is split, but the cover is securely attached. Otherwise in decent condition. Available for $6.

Hall, Gerald L. (editor) "The ARRL Antenna Compendium (Vol. 3)" published in Newington, CT, U.S.A.: American Radio Relay League, Incorporated, 1992. ISBN: 0872594017 The 236 page softbound book is in fine condition, fresh and clean inside and out. Lots of useful information on radio antennas. Available for $7.

Erwin, David G4LQ1 "HF Antenna Collection" published by the Radio Society of Great Britain, 1994. ISBN 1872309089 The 233 page softbound book is in fine condition, fresh and clean inside and out. Lots of useful information on radio antennas. Available for $7.

If interested in any of the above, please email to "Oldbooks78@aol.com" to reserve. Thanks.

Dave

3638. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 23:05:31 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <%oAG8.51294$yl.6001093@bin3.nnrp.aus1.giganews.com>
Source record: 44079
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

Don't they have gennies down there? I live in a part of the third world called New Jersey and our electric company, once known as General Public Utilities (aka three mile island) is notable for outages. Some joke on us, they got taken over by First Energy which discovered holes in the Davis Besse nuclear reactor (used to be Cleveland Electric). Ergo hoc, propter hoc I have two generators for power outages.

"Rick Manns" <nospamrjmanns@kuentos.guam.netnospam> wrote in message news:x0uG8.505$vhi2.28311765@news2.randori.com...
> Brian,
>
> I don't know about the link you are looking for, but the company I work for
> sells the item(s) you looking for. Go to http://www.solcomguam.com
>
> Good luck with your battery project.
>
> Rick - KB6IDK/KH2
>
>
>
> "Brian" <lea1bri@optusnet.com.au> wrote in message
> news:3cea3a54$0$4691$afc38c87@news.optusnet.com.au...
> > I don't know if anyone has seen the website I'm looking for (I hope they
> > have), but I've lost the link so I cant give it to anyone either.
> > Hoping someone can help me with the web address.
> >
> > The website is about a bloke in America (maybe Canada I can't remember).
> He
> > is an amateur that lives in a zone where the power delivery isn't
> fantastic.
> > To combat this he set up a car battery in a battery box with a volt meter
> > and a cigarette lighter socket built in (as well as big posts for his
> radio
> > equipment). Apparently this wasn't good enough so he linked up a solar
> > system to it as well. There were a couple of other attachments also.
> >
> > Hoping someone can help me out with the address for it.
> >
> > Thanks in advance,
> >
> > Brian.

> > Sydney Australia.
> >
> >
> >
>
>

3639. Re: Terminating HC4066 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-21 23:40:21 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3CEADAE6.A27433DE@cox.net>
Source record: 44080

I used a pair of 9851s phased 90 degrees apart to run one of my DC quadrature detectors. A pair of 9851's draw much less power than a single 9854, and it allowed me to run at 1x on both 9851s, but still generate the two bit clocking sequence that you are discussing with a 7474.

However, my experience was that the 9851's generated a fair number of very narrow birdie spurs. I was stepping the 9851's at a 0.014 Hz resolution for continuos tuning. If a larger step size like 25 or 50 Hz were used, most of these birdies would be skipped right over.

- Dan Tayloe, N7VE; Phoenix, Az; Az ScQRPions

Markus Wolfgart wrote:
>
> Hallo Harold,
>
> I have read some articles in the German ham magazine Funkamateur
> about this concept with the pair of 2xD-FF (74x74) for generating
> clock for a 74HCT4066 Mixer for a I and Q channel DC-RX.
> I have made some scanned copies, if you are keen on it, I can
> mail them as a attachment to you.
> In the case someone use a DDS like the AD9854/9857 for the switching
> of the 4066 he avoid it to make different LO's with four times higher
> frequencies for the different sw-bands.
> When using the ad9854/57 you get a better phase noise (about 80 dB SFDR)
> because of the 12/14bit DAC.
> When someone avoid to use the internal multiplier of the DDS chip like
> you
> mentioned before and take a stable oscillator for clocking the DDS he
> could
> achieve a good performance over a wide range of frequencies.
> I have not tried it before but this will be may next fovored project in
> the future.
>
> 73 & gd dx
>
> Markus
>
> DL8MBY
>
> ==
>
> Markus Wolfgart
>

> DLR
>
> ==
> PS.: remove the xx_ from email adr. to replay
> ==

3640. Re: Terminating HC4066 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 00:22:36 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CEAE52C.5B60@pop.removethistomailme.net>
Source record: 44081

Dan Tayloe wrote:
>
> I used a pair of 9851s phased 90 degrees apart to run one of my DC
> quadrature detectors. A pair of 9851's draw much less power than a
> single 9854, and it allowed me to run at 1x on both 9851s, but still
> generate the two bit clocking sequence that you are discussing with a
> 7474.
>
> However, my experience was that the 9851's generated a fair number of
> very narrow birdie spurs. I was stepping the 9851's at a 0.014 Hz
> resolution for continuos tuning. If a larger step size like 25 or 50 Hz
> were used, most of these birdies would be skipped right over.
>

Those 10-bit DDS parts are junk (IMNSHO). Fine for a BFO, but I
wouldn't use them for anything else.... certainly not to drive any mixer
that doesn't have a sharp filter in front of it.

The 9852/9854 generation is much better, and they're not really that
much harder to use.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3641. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 00:31:16 UTC
From: Brian P Burke <bpburke@prodigy.net>
Message-ID: <oFBG8.872$g97.36797532@newssvr15.news.prodigy.com>
Source record: 44082
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

"Brian" <lea1bri@optusnet.com.au> wrote in message
news:3cea3a54$0$4691$afc38c87@news.optusnet.com.au...
> I don't know if anyone has seen the website I'm looking for (I hope they
> have), but I've lost the link so I cant give it to anyone either.
> Hoping someone can help me with the web address.
>
> The website is about a bloke in America (maybe Canada I can't remember).
He
> is an amateur that lives in a zone where the power delivery isn't
fantastic.
> To combat this he set up a car battery in a battery box with a volt meter
> and a cigarette lighter socket built in (as well as big posts for his
radio
> equipment). Apparently this wasn't good enough so he linked up a solar
> system to it as well. There were a couple of other attachments also.
>
> Hoping someone can help me out with the address for it.
>
> Thanks in advance,
>
> Brian.
> Sydney Australia.

KG6DX ran two trolling motor batteries with his power supply. Guam was the land of the blinking clock, and its probably worse now that the money has left.

3642. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 00:40:53 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uelqa7tb8j1o2e@corp.supernews.com>
Source record: 44083
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

"Russell C. Nixon" <rcnixon@mindspring.com> wrote in message

> Brian, you would be better off using a battery made for supplying a
> relatively small amount of current for a longer time. A car battery
> is optimized to supply a huge amount of current (100 to 200 amps) for
> a short time in order to turn the starter motor. When the car is

Probably so, but a car battery will run the station for an awfully long time. Out here in the wilds of Michigan it's fairly common practice to use a car battery and a trickle charger. Combined they cost less than a "proper" supply, and even the worst ice storm rarely takes out the power long enough to drain the battery.

..

3643. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 00:40:55 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uelqa8q3if5a2f@corp.supernews.com>
Source record: 44084
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

"Gareth Rowlands" <gareth@lightfox.demon.co.uk> wrote in message

> IIRC a razor blade was
> one of the principal components.

Good heavens, you never made a "foxhole radio" when you were a Boy Scout? A razor blade, preferably a little rusty, and a pencil lead. They used to have blades that had bluing on them like a gun ... if I recall, they worked extremely well, or maybe not at all, now I'm not so sure. I was probably 8 or 9 at the time.

..

3644. FS: More Various, Sundry & different parts, Chokes, IF Cans, Etc!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 01:42:15 UTC
From: rlucch2098@aol.com
Message-ID: <20020521214215.29539.00000135@mb-mm.aol.com>
Source record: 44085

Hi Fellas;
I have for SALE:
1)- bag of 20 various I.F. Cans, millers & other brands, 10.7FM, 440-475kc, 250-275 air core, 455 Discriminator, etc
Price is $22ppd, See pic>>
http://www.myradioroom.com/20ifcans.jpg

2)- 42 Various Value Wire Wound Power resistors, Price is $15.00ppd, See pic>>
http://www.myradioroom.com/42powerresistors.jpg

3)- 230 Wire Wound Chokes, various values such as .9, .3, .1, 1.4, .4 Uh. About 50% have adjustable cores.
Price is $23.00ppd, see pic>>
http://www.myradioroom.com/230-wwchokes.jpg

Thanks es 73..........RICH-WA2RQY RLUCCH2098@aol.com
Manual Copies @ http://www.myradioroom.com/manualsale.html
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

3645. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 02:10:52 UTC
From: captbrian <captbrian@ukonline.co.uk>
Message-ID: <e6DG8.7147$1c.1594140@monolith.news.easynet.net>
Source record: 44087
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

Don't know the site but all you need you will find in yachts chandlery catalogues. We live permanently on 12 v batteries. Solar / wind / additional engine alternator / towed rotator if we could get 12v from rubbing two sticks togethere we would do it.

Bryan AC4UA - G3GVB

Brian <lea1bri@optusnet.com.au> wrote in message news:3cea3a54$0$4691$afc38c87@news.optusnet.com.au...
> I don't know if anyone has seen the website I'm looking for (I hope they
> have), but I've lost the link so I cant give it to anyone either.
> Hoping someone can help me with the web address.
>
> The website is about a bloke in America (maybe Canada I can't remember). He
> is an amateur that lives in a zone where the power delivery isn't fantastic.
> To combat this he set up a car battery in a battery box with a volt meter
> and a cigarette lighter socket built in (as well as big posts for his radio
> equipment). Apparently this wasn't good enough so he linked up a solar
> system to it as well. There were a couple of other attachments also.
>
> Hoping someone can help me out with the address for it.
>
> Thanks in advance,
>
> Brian.
> Sydney Australia.
>
>

3646. Re: Terminating HC4066 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 03:14:13 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3CEB0D05.7810BEAC@cox.net>
Source record: 44088

Actually the extra two bits (12 vs 10) for the 9854 vs the 9851 don't seem to gain it very much, at least from the advertised specifications. Narrow band spurs are 80 to 90 db down for both parts (wideband ~ 50 db down), with the 9854 being only a couple db better than the 9851.

My experience showed me that the 9851 was not a good part for direct use as a VFO for a high performance radio, and the 9854 is at best a few db better (from the specs). I understand that they can be cleaned up significantly by using it as a reference to a VCO and have seen much exciting work on that topic on this list.

On the other hand, the even less complex 9835 does well in the DSW series QRP rigs because it provides a simple, stable frequency source and not everyone needs the ultimate experience in high end receiver performance.

I myself am trying to pursue very high end receiver performance with very low end current drain and DDSs don't provide what I am looking for.

One good thing I noticed when using the dual 9851s, the quadrature drive I got from that arrangement was superior to using a pair of very fast 74LCX74 flip-flops clocked at 4x, even when both flip-flops were driven simultaneously from the same 4x clock signal. When using the flip-flop approach, the DC quadrature balanced shifted from band to band, making it necessary to provide a balance adjust for the different bands to get the best DC image rejection. This was not necessary when using the dual 9851s as the balance was rock solid from 1.8 to 30 MHz.

- Dan, N7VE

John Miles wrote:
>
> Those 10-bit DDS parts are junk (IMNSHO). Fine for a BFO, but I
> wouldn't use them for anything else.... certainly not to drive any mixer
> that doesn't have a sharp filter in front of it.
>
> The 9852/9854 generation is much better, and they're not really that
> much harder to use.
>
> -- jm
>
> Dan Tayloe wrote:
> >
> > I used a pair of 9851s phased 90 degrees apart to run one of my DC
> > quadrature detectors. A pair of 9851's draw much less power than a
> > single 9854, and it allowed me to run at 1x on both 9851s, but still

> > generate the two bit clocking sequence that you are discussing with a
> > 7474.
> >
> > However, my experience was that the 9851's generated a fair number of
> > very narrow birdie spurs. I was stepping the 9851's at a 0.014 Hz
> > resolution for continuos tuning. If a larger step size like 25 or 50 Hz
> > were used, most of these birdies would be skipped right over.
> >

3647. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 03:36:35 UTC
From: Newbie <newbie@nowhere.net>
Message-ID: <uem4hcmftj02a1@corp.supernews.com>
Source record: 44089
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:uelqa8q3if5a2f@corp.supernews.com...
> "Gareth Rowlands" <gareth@lightfox.demon.co.uk> wrote in message
>
> > IIRC a razor blade was
> > one of the principal components.
>
> Good heavens, you never made a "foxhole radio" when you were a Boy Scout?
A
> razor blade, preferably a little rusty, and a pencil lead. They used to
> have blades that had bluing on them like a gun ... if I recall, they
worked
> extremely well, or maybe not at all, now I'm not so sure. I was probably
8
> or 9 at the time.
>
> ..
>
>

How about a little "on the net" training in how to build a "foxhole radio"?

3648. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 04:12:08 UTC
From: Brenda Ann <brandad@kornet.net>
Message-ID: <acf4qf$576$1@news1.kornet.net>
Source record: 44090
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

The blue blades didn't work well.. the "bluing" was a sort of plastic
coating that kept the pencil lead (or safety pin) from conducting.

"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:uelqa8q3if5a2f@corp.supernews.com...
> "Gareth Rowlands" <gareth@lightfox.demon.co.uk> wrote in message
>
> > IIRC a razor blade was
> > one of the principal components.
>
> Good heavens, you never made a "foxhole radio" when you were a Boy Scout?
A
> razor blade, preferably a little rusty, and a pencil lead. They used to
> have blades that had bluing on them like a gun ... if I recall, they
worked
> extremely well, or maybe not at all, now I'm not so sure. I was probably
8
> or 9 at the time.
>
> ..
>
>

3649. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 04:20:06 UTC
From: Brenda Ann <brandad@kornet.net>
Message-ID: <acf59d$64f$1@news1.kornet.net>
Source record: 44091
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

Foxhole radios are about the very simplest radio receiver possible. They can be built from any two dissimilar metals and a length of wire and a crystal earphone. During WWII, the parts of choice were a safety razor blade and a either a pencil lead or safety pin. The blade was mounted to a piece of wood as was the safety pin. The pin was mounted so that the point end could be moved around the surface of the blade to find the most sensitive detection point. The length of wire was connected to the blade, one side of the earphone was connected to the safety pin. The other side of the earphone was connected to a ground point. These radios had neither selectivity (they picked up whatever was closest) nor sensitivity. They were best suited to receiving CW (Morse) signals, although they did receive AM signals as well. Alternatively, a high impedence dynamic earphone, popular at that time, could also be used.

"Newbie" <newbie@nowhere.net> wrote in message
news:uem4hcmftj02a1@corp.supernews.com...
>
> "xpyttl" <xpyttl_nospam@earthling.net> wrote in message
> news:uelqa8q3if5a2f@corp.supernews.com...
> > "Gareth Rowlands" <gareth@lightfox.demon.co.uk> wrote in message
> >
> > > IIRC a razor blade was
> > > one of the principal components.
> >
> > Good heavens, you never made a "foxhole radio" when you were a Boy
Scout?
> A
> > razor blade, preferably a little rusty, and a pencil lead. They used to
> > have blades that had bluing on them like a gun ... if I recall, they
> worked
> > extremely well, or maybe not at all, now I'm not so sure. I was
probably
> 8
> > or 9 at the time.
> >
> > ..
> >
> >
>
> How about a little "on the net" training in how to build a "foxhole
radio"?
>
>

3650. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 05:23:11 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uemaq16b38f212@corp.supernews.com>
Source record: 44092
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

The only CW they could pick up would be MCW which is AM.

"Brenda Ann" <brandad@kornet.net> wrote in message
news:acf59d$64f$1@news1.kornet.net...
> Foxhole radios are about the very simplest radio receiver possible. They
can
> be built from any two dissimilar metals and a length of wire and a crystal
> earphone. During WWII, the parts of choice were a safety razor blade and a
> either a pencil lead or safety pin. The blade was mounted to a piece of
wood
> as was the safety pin. The pin was mounted so that the point end could be
> moved around the surface of the blade to find the most sensitive detection
> point. The length of wire was connected to the blade, one side of the
> earphone was connected to the safety pin. The other side of the earphone
was
> connected to a ground point. These radios had neither selectivity (they
> picked up whatever was closest) nor sensitivity. They were best suited to
> receiving CW (Morse) signals, although they did receive AM signals as
well.
> Alternatively, a high impedence dynamic earphone, popular at that time,
> could also be used.
>
> "Newbie" <newbie@nowhere.net> wrote in message
> news:uem4hcmftj02a1@corp.supernews.com...
> >
> > "xpyttl" <xpyttl_nospam@earthling.net> wrote in message
> > news:uelqa8q3if5a2f@corp.supernews.com...
> > > "Gareth Rowlands" <gareth@lightfox.demon.co.uk> wrote in message
> > >
> > > > IIRC a razor blade was
> > > > one of the principal components.
> > >
> > > Good heavens, you never made a "foxhole radio" when you were a Boy
> Scout?
> > A
> > > > razor blade, preferably a little rusty, and a pencil lead. They used
to
> > > > have blades that had bluing on them like a gun ... if I recall, they
> > worked
> > > > extremely well, or maybe not at all, now I'm not so sure. I was
> probably
> > 8
> > > > or 9 at the time.

> > >
> > > ..
> > >
> > >
> >
> > How about a little "on the net" training in how to build a "foxhole
> radio"?
> >
> >
>
>

3651. N6WWW - New Message Board Added on my ham page

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 05:41:05 UTC
From: Neon Moon <neonmoonx@hotmail.com>
Message-ID: <MaGG8.81663$Po6.144808@rwcrnsc52.ops.asp.att.net>
Source record: 44093
Cross-posted to:
alt.ham-radio.vhf-uhf,rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.swap

Hey Hams,

On my ham page I added a really slick message board that some of you may enjoy. If anything, it's fun to look at the really neat interface.

Anyway, I tossed a couple of messages on it. It's there for all to enjoy.

http://n6www.cjb.net

Click on Message Board near the top.

Let me know if there are any other discussion sections you'd like me to add to the page.

I also have liks to ULS, IRLP, Homebrew, QRP, and ham training sites for those interested in seeing some of the fun places I've found along the way.

Also, I'm hanging out on IRLP node 396 for anyone looking to say hi! It's about 10:30pm Pacific time on Tuesday May 21st... I'll probably be on for another hour or two. It would be fun to hear anyone's take on my new pages. I'm not a webmaster, so I'm learning.as I go...

73's

Jason - N6WWW - I'm 404 lol

3652. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 06:43:43 UTC
From: Radio Ham <no.spam@no.spam>
Message-ID: <3ceb4117_3@mk-nntp-1.news.uk.worldonline.com>
Source record: 44094
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

It always amazes me the hypocritical indignance
about the Japs invasion behaviour. Just how did the
Brits get there in the first place themselves?

Gareth Rowlands <gareth@lightfox.demon.co.uk> wrote in message
news:20020521.173257.85@lightfox.demon.co.uk...
> In article <CIqG8.3207$7M3.965594@news11-gui.server.ntli.net>,
> adamory@ntlworld.com ("adamory") wrote:
> > I seem to remember somewhere that English POW's in Japan and the
> > far east made radio receivers using basic things they found
> The late Tom Douglas who held the call G3BA was a Prisoner of the Japs.
> He fashioned a makeshift 'crystal' receiver - IIRC a razor blade was
> one of the principal components.

3653. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 06:45:30 UTC
From: Radio Ham <no.spam@no.spam>
Message-ID: <3ceb4118_3@mk-nntp-1.news.uk.worldonline.com>
Source record: 44095
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

Oh, sure. You just happen to have a high-tech
audio reproducer such as a crystal earpiece in
your "foxhole". How come?

Brenda Ann <brandad@kornet.net> wrote in message
news:acf59d$64f$1@news1.kornet.net...
> Foxhole radios are about the very simplest radio receiver possible. They
can
> be built from any two dissimilar metals and a length of wire and a crystal
> earphone.

3654. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 06:46:04 UTC
From: Radio Ham <no.spam@no.spam>
Message-ID: <3ceb4119_3@mk-nntp-1.news.uk.worldonline.com>
Source record: 44096
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

A1A is also AM

Fred Hambrecht <w4jle@charter.net> wrote in message
news:uemaq16b38f212@corp.supernews.com...
> The only CW they could pick up would be MCW which is AM.

3655. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 08:10:56 UTC
From: andy <music@soon.com>
Message-ID: <acgim0$762$1@newsg1.svr.pol.co.uk>
Source record: 43956
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

"Newbie" <newbie@nowhere.net> wrote in message
news:uem4hcmftj02a1@corp.supernews.com...
> "xpyttl" <xpyttl_nospam@earthling.net> wrote in message
> news:uelqa8q3if5a2f@corp.supernews.com...
> > "Gareth Rowlands" <gareth@lightfox.demon.co.uk> wrote in message

> > > IIRC a razor blade was
> > > one of the principal components.
> > Good heavens, you never made a "foxhole radio" when you were a Boy
Scout?
> A razor blade, preferably a little rusty, and a pencil lead. They used to
> > have blades that had bluing on them like a gun ... if I recall, they
> worked
> > extremely well, or maybe not at all, now I'm not so sure. I was
probably
> 8
> > or 9 at the time.

> How about a little "on the net" training in how to build a "foxhole
radio"?

Do a search, there are plenty of "on the net" features on building foxhole
radios.

Someone also posted URLs here very recently.

3656. FS: RS31g WW2 German power triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 08:39:23 UTC
From: arnoldg@c2i.net
Message-ID: <3ceb58fd.606546@news1.c2i.net>
Source record: 43947
Cross-posted to:
rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.audio.marketplace

Hello,

I have one of these nice vintage power triodes in stock. Heater is 10V
4.8A, anode dissipation is 65W and max anode voltage is 1600V. The
valve is NOS and in its original box. You will find a picture and more
data at my web site - www.demostenes.no
Just search for RS 31g.
Please contact me if you are interested.

Regards,

Arnold Goks&#65533;yr
DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267
http://www.demostenes.no

Thousands of different valves in stock as well as
sockets,transformers,books,caps,resistors and
other components. Web site is updated every week.
You can order on-line.

3657. Stolen R7 / R7000 webpage

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 08:41:20 UTC
From: John Tait <bravo@iol.ie>
Message-ID: <QQIG8.7542$04.21760@news.iol.ie>
Source record: 43948

Hi Folks..
Please note that there is a gentleman who has posted messages
to the various Radio newsgroups stating...

"Here is a very informative Cushcraft R7 / R7000 tech page I found
with illustrations, tech tips, R7 trap drawings, R7 and R7000
instruction and assembly manuals too." etc etc

Please note that this page has been stolen from my site at
http://www.iol.ie/~bravo/

73
John EI7BA

3658. *Very OT* Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 13:07:24 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3CEB980C.8E0AB9E8@crosslink.net>
Source record: 43949
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

Radio Ham wrote:
>
> It always amazes me the hypocritical indignance
> about the Japs invasion behaviour. ...

Even more amazing is the ignorance folks like yourself have of that behavior.

I worked with a Phillipino who'd been a teen during the Jap invasion. He said most expected the Japs to act like the Americans or the Spanish before them. The didn't! They beat him and his dad half to death, raped his mother and sisters then hauled his older brother off to a labor camp and his sister to a brothel where both died within a few months. He survived because his mother was from a jungle tribe and they hid with them. If that's not enough, consider what happened in China and Korea. Worse yet, modern Japanese still have shrines venerating the perp's of these atrocities! That's reality!

73, K3DWW

3659. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 13:40:40 UTC
From: Radio Ham <no.spam@no.spam>
Message-ID: <3ceb9f61$1_3@mk-nntp-1.news.uk.worldonline.com>
Source record: 43950
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

Sounds typical of the behaviour of invading forces
when colonising. The Brits were no different, the Union
Jack flag being known as The Butcher's Apron.

And just what effect do you suppose that your own Yankie
missiles had on the civilian population of Iraq, Bosnia, etc?

Yup - that's right; your fellow humans were burnt to death,
had limbs blown off; were crushed to death under buildings.
Doesn't seem much difference between the Japanese of the
1940's and the Americans of today in terms of the effects
on their victims, does there?

In terms of the American involvement with the Japanese,
the matter of Pearl Harbour, far from being a day of infamy, was
an honourable attack. The stupid Secretary Of State was playing
childish games in respect of not giving an audience to the
Japanese ambassadors, and that is the _ONLY_ reason
that the USA had no warning. The Japanese were entirely
honourable in declaring war and then attacking.

Vito <vito@crosslink.net> wrote in message
news:3CEB980C.8E0AB9E8@crosslink.net...
> Radio Ham wrote:
> >
> > It always amazes me the hypocritical indignance
> > about the Japs invasion behaviour. ...
>
> Even more amazing is the ignorance folks like yourself have of that
> behavior.
>
> I worked with a Phillipino who'd been a teen during the Jap invasion. He
> said most expected the Japs to act like the Americans or the Spanish
> before them. The didn't! They beat him and his dad half to death, raped
> his mother and sisters then hauled his older brother off to a labor camp
> and his sister to a brothel where both died within a few months. He
> survived because his mother was from a jungle tribe and they hid with
> them. If that's not enough, consider what happened in China and Korea.
> Worse yet, modern Japanese still have shrines venerating the perp's of
> these atrocities! That's reality!
>
> 73, K3DWW

3660. Broadcast Quality Switches

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 14:06:33 UTC
From: Dave Miller <aa4df@aa4df.com>
Message-ID: <3CEBA7C8.FB8F5036@aa4df.com>
Source record: 43952

Anyone needing broadcast quality lever or pushbutton switches for a
homebrew project might want to check out
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1733910071

3661. Re: *Very OT* Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 14:07:37 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3ceba550.880112@news.freeserve.net>
Source record: 43951
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

On Wed, 22 May 2002 09:07:24 -0400, Vito <vito@crosslink.net> wrote:

>Radio Ham wrote:
>>
>> It always amazes me the hypocritical indignance
>> about the Japs invasion behaviour. ...
>
>Even more amazing is the ignorance folks like yourself have of that
>behavior.
>
>I worked with a Phillipino who'd been a teen during the Jap invasion. He
>said most expected the Japs to act like the Americans or the Spanish
>before them. The didn't! They beat him and his dad half to death, raped
>his mother and sisters then hauled his older brother off to a labor camp
>and his sister to a brothel where both died within a few months. He
>survived because his mother was from a jungle tribe and they hid with
>them. If that's not enough, consider what happened in China and Korea.
>Worse yet, modern Japanese still have shrines venerating the perp's of
>these atrocities! That's reality!
>
>73, K3DWW

No one can say their nation has not committed atrocities in the name
of the nation.
But lets hope we all learn from their, and our, errors. But more
importantly, lets just let bygones be bygones.

3662. 7360 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 14:56:49 UTC
From: "c.s.lee" <chslee@kornet.net>
Message-ID: <acgain$e2s$1@news1.kornet.net>
Source record: 43973

Does anyone tell me about the dynamic range performance of a RCA 7360 valve mixer vis a vis a diode ring mixer in the front end of a short wave superheterodyne receiver?

Lee - 6K2BTO

3663. Lead Acid Batteries charge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 15:00:35 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <7pOG8.11349$D16.2527741@news6-win.server.ntlworld.com>
Source record: 43953

Powering my Amateur Radio station and desk lighting from 12V lead-acid batteries I am charging the batteries to 13.8 V (sealed batteries to 13.5 V) Occasionally the non-sealed (non gel-type) batteries are charged to 14.4 V for a limited period.
I would like to know when the batteries are discharged how much the charge is reduced in respect of the total charge available when the voltage drops from 13.8 V (13.5V) to 12.5V.
With the total charge available I mean the charge in Ah (Ampere*hour) from fully charged to discharged state , fully charged meaning 13.8 V , discharged meaning a terminal voltage of 11.5 V .
Although there is a lot of information available on the Web re lead-acid batteries , I haven't been able to find this info.
Perhaps someone on this NG knows a site showing a graph 'Percentage Available Charge' against 'Battery Voltage' .

TIA for any advice

Frank gm0csz.kn6wh@ntlworld.com

3664. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 15:21:14 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uendrgk0qubh34@corp.supernews.com>
Source record: 43954
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

Your absolutely right in every post you make. We of the ham community now realize your omnipotent intelligence.

With this in mind, you no longer need to waste your time typing messages. Simply send blank messages with only your signature and we can all imagine the wisdom you would have imparted.

"Radio Ham" <no.spam@no.spam> wrote in message
news:3ceb9f61$1_3@mk-nntp-1.news.uk.worldonline.com...
> Sounds typical of the behaviour of invading forces
> when colonising. The Brits were no different, the Union
> Jack flag being known as The Butcher's Apron.
>
> And just what effect do you suppose that your own Yankie
> missiles had on the civilian population of Iraq, Bosnia, etc?
>
> Yup - that's right; your fellow humans were burnt to death,
> had limbs blown off; were crushed to death under buildings.
> Doesn't seem much difference between the Japanese of the
> 1940's and the Americans of today in terms of the effects
> on their victims, does there?
>
> In terms of the American involvement with the Japanese,
> the matter of Pearl Harbour, far from being a day of infamy, was
> an honourable attack. The stupid Secretary Of State was playing
> childish games in respect of not giving an audience to the
> Japanese ambassadors, and that is the _ONLY_ reason
> that the USA had no warning. The Japanese were entirely
> honourable in declaring war and then attacking.
>
> Vito <vito@crosslink.net> wrote in message
> news:3CEB980C.8E0AB9E8@crosslink.net...
> > Radio Ham wrote:
> > >
> > > It always amazes me the hypocritical indignance
> > > about the Japs invasion behaviour. ...
> >
> > Even more amazing is the ignorance folks like yourself have of that
> > behavior.
> >
> > I worked with a Phillipino who'd been a teen during the Jap invasion. He
> > said most expected the Japs to act like the Americans or the Spanish
> > before them. The didn't! They beat him and his dad half to death, raped
> > his mother and sisters then hauled his older brother off to a labor camp

> > and his sister to a brothel where both died within a few months. He
> > survived because his mother was from a jungle tribe and they hid with
> > them. If that's not enough, consider what happened in China and Korea.
> > Worse yet, modern Japanese still have shrines venerating the perp's of
> > these atrocities! That's reality!
> >
> > 73, K3DWW
>
>

3665. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 15:28:25 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uene8un52gdebf@corp.supernews.com>
Source record: 43955
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

OK, pick it up on a crystal set and copy it. I was responding to the statement that a crystal set was best suited for CW, but could also pick up AM.

I disagee with your premise that A1A is AM.

Modulation implies adding audio to a carrier. Simply doing on/off keying adds no modulation (disregarding key clicks etc)

"Radio Ham" <no.spam@no.spam> wrote in message news:3ceb4119_3@mk-nntp-1.news.uk.worldonline.com...
> A1A is also AM
>
> Fred Hambrecht <w4jle@charter.net> wrote in message
> news:uemaq16b38f212@corp.supernews.com...
> > The only CW they could pick up would be MCW which is AM.
>
>
>

3666. Re: Lead Acid Batteries charge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 17:33:16 UTC
From: Bill & Suzie Whatley <spud286@attbi.com>
Message-ID: <wDQG8.4562$ux5.3610@rwcrnsc51.ops.asp.att.net>
Source record: 43957

The only reliable source for this info is the manufacturer,
The characteristics are different for each battery although with enough data you could probably come up with an average curve chart for each type such as lead-acid.

73

WA5VRL
Willis

3667. Re: Minimum Loss Pad

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 17:40:56 UTC
From: k7itm@aol.com
Message-ID: <3200347.0205220940.26df1ecf@posting.google.com>
Source record: 43958

k7itm@aol.com (Tom Bruhns) wrote in message
news:<3200347.0205211055.160144bf@posting.google.com>...
Yesterday I wrote:
> (As a check, it looks like -8.6938dB to me, for the
> 200:120 case, -12.9408dB for the 300:120 case.)

No, no, no, dumb bear. Of course I should have calculated the power
ratio, not just the voltage ratio, and should get the values you found
from Reg's program. One could also correct the above values by adding
10 log (200/120) and 10 log (300/120) to them.

Cheers,
Tom

3668. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 17:41:45 UTC
From: lucifer@eternal-flames.gov
Message-ID: <3cebd303.1133429@news.btinternet.com>
Source record: 43959
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

On Wed, 22 May 2002 14:40:40 +0100, "Radio Ham" <no.spam@no.spam>
wrote:

>the matter of Pearl Harbour, far from being a day of infamy, was
>an honourable attack. The stupid Secretary Of State was playing
>childish games in respect of not giving an audience to the
>Japanese ambassadors, and that is the _ONLY_ reason
>that the USA had no warning. The Japanese were entirely
>honourable in declaring war and then attacking.

I think we've established that you know as much about modern history
as you do about Latin... i.e. BOG ALL! So there really is no
need to prove it by making such childish postings as you do all the
time. You are only making yourself look ridiculous.

Cacoethes scribendi.

Old Nick.

3669. RadioShack.Com in Atlanta

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 17:59:31 UTC
From: NoBody <NotHere@NoWhere.net>
Message-ID: <3CEBDBEA.8DC39A59@NoWhere.net>
Source record: 43960

For folks on the north end of 285 I came across a replacement for the Radio Shack that recently closed on Buford Highway. That preceded by Delta getting out of the parts business sure put a crimp in my parts availability.

Today I discovered Austin Electronics which is off Jimmy Carter boulevard,,,,, great stock including surplus goodies...

Ted Kester KD4EE

3670. Re: Lead Acid Batteries charge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 18:21:24 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3CEBE1A4.18CFA5AA@ieee.org>
Source record: 43961

Frank Dinger wrote:

> Powering my Amateur Radio station and desk lighting from 12V lead-acid
> batteries I am charging the batteries to 13.8 V (sealed batteries to 13.5 V)
> Occasionally the non-sealed (non gel-type) batteries are charged to 14.4 V
> for a limited period.
> I would like to know when the batteries are discharged how much the charge
> is reduced in respect of the total charge available when the voltage drops
> from 13.8 V (13.5V) to 12.5V.
> With the total charge available I mean the charge in Ah (Ampere*hour) from
> fully charged to discharged state , fully charged meaning 13.8 V ,
> discharged meaning a terminal voltage of 11.5 V .
> Although there is a lot of information available on the Web re lead-acid
> batteries , I haven't been able to find this info.
> Perhaps someone on this NG knows a site showing a graph 'Percentage
> Available Charge' against 'Battery Voltage' .
>
> TIA for any advice
>
> Frank gm0csz.kn6wh@ntlworld.com

The best way to find this info. is by your own test. Put a known load on the
fully
charged battery and watch the voltage. when it gets to your cutoff volyage, you
calculate the total amp hours.

The main problem is this will change as the battery ages.

Bill K7NOM

3671. Coil length and winding pitch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 19:21:07 UTC
From: k7itm@aol.com
Message-ID: <3200347.0205221121.5c148d90@posting.google.com>
Source record: 43962

Please humor me with a straight answer to what seems a simple question. If I wind a simple single layer RF coil, what is the winding pitch in terms of the coil length and the number of turns? Or, conversely, if I know the pitch and number of turns, what's the length? For instance, if I wind two turns on a 3/8"x16TPI bolt, so the pitch is 1/16", how long a coil does that two turns make? How long a coil is 8 turns wound on the same bolt?

Cheers,
Tom

3672. Re: Lead Acid Batteries charge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 19:21:57 UTC
From: gaschafer@attbi.com
Message-ID: <3cebf07d.16817295@netnews.attbi.com>
Source record: 43965

Hi Frank,

It depends on the type of battery you have. In wet / flooded batteries there are different make
ups of the plates. Some use lead/antimony and some use lead/calcium.

Deep cycle batteries typically are fully charged at 12.8 volts. They are 50% discharged at 12.2
volts and flat dead at 10.8 volts.
In order to measure the voltage they need to set for about 6 hours or so with no load or charge
connected. It is also a good idea to load them a little first to get rid of the surface charge that
can be on them which will give you a false reading.

If you can test the specific gravity of each cell that is a good indicator of charge also. Get a
hydrometer with a thermometer in it as temperature matters. On the site below there is a charge
curve for various charge levels for specific gravity as well as voltage. Look under FAQs.

Keep in mind that other plate makeup will show different readings.

It is best to float them when not in use at around 13.2 to 13.4 volts. They are very happy long
term at these voltages. But the float voltage also depends on the make up of the battery and it's
temperature. Find out from the manufacturer what they should float at. A .1 volt difference is
very important. Charging is normally done with voltage limited from 14.2 to 14.8 depending on
the type of battery. As a general rule the charge current should not exceed 25% of the amp hour
ratting.

You should never discharge a "deep cycle" battery to more than 50% of it's capacity. Non deep
cycle (starting types) should not be discharged anywhere near that much. In either case the
deeper you discharge them the shorter life expectancy.

Here is a site that gives some info on the Rolls batteries, considered to be kind of the Caddelac
of deep cycle batteries.

http://www.dcbattery.com/rolls_cs_plate_discharge_curve.html

http://www.dcbattery.com/faq.html

73
Gary K4FMX

On Wed, 22 May 2002 16:00:35 +0100, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>Powering my Amateur Radio station and desk lighting from 12V lead-acid
>batteries I am charging the batteries to 13.8 V (sealed batteries to 13.5 V)
>Occasionally the non-sealed (non gel-type) batteries are charged to 14.4 V
>for a limited period.
>I would like to know when the batteries are discharged how much the charge
>is reduced in respect of the total charge available when the voltage drops
>from 13.8 V (13.5V) to 12.5V.
>With the total charge available I mean the charge in Ah (Ampere*hour) from
>fully charged to discharged state , fully charged meaning 13.8 V ,
>discharged meaning a terminal voltage of 11.5 V .
>Although there is a lot of information available on the Web re lead-acid
>batteries , I haven't been able to find this info.
>Perhaps someone on this NG knows a site showing a graph 'Percentage
>Available Charge' against 'Battery Voltage' .
>
>TIA for any advice
>
>Frank gm0csz.kn6wh@ntlworld.com
>
>

3673. Re: Power/SWR Meter Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 19:23:23 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3CEBF0CF.A3BA9B7C@bellatlantic.net>
Source record: 43963

Jerry W Campbell wrote:
>
> A friend died an his wife gave me a
> a bunch of radio junk. In the box I found a Heathkit HM-2102
> VHF power/swr meter. There was no manual and I don't know
> what the SWR Sensitivity knob is for or how to set it.
> I was hoping someone here might know and could tell me in a few words.
> Thank You,
> Jerry KB7BKN
> Summit, Oregon

From the manual:

1) Turn the FUNCTION switch to SWR.
2) Pull the SWR SENS switch out and turn it fully
counterclockwise.
3) Apply power to the transmitter and tune it for
maximum RF output reading. Disregard the Power
Meter reading at this time.
4) Turn the SWR SENS control clockwise for a midscale
meter reading. A minor "touch-up" tuning of the
transmitter may show an increase on the Meter. This
indicates a closer match between the transmitter and
the transmission line.
5) Turn the SWR SENS control clockwise to give a full-scale
meter reading.
6) Push the SWR SENS control knob in and read the SWR
directly on the lower meter scale.

3674. Re: Lead Acid Batteries charge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 19:33:01 UTC
From: denton <denton@oregontrail.net>
Message-ID: <acgr87pkr1@news.apaynet.com>
Source record: 43964

Find a Minn Kota battery charge indicator...usually found where trolling
motors are sold.
Frank Dinger <gm0csz.kn6wh@ntlworld.com> wrote in message
news:7pOG8.11349$D16.2527741@news6-win.server.ntlworld.com...
> Powering my Amateur Radio station and desk lighting from 12V lead-acid
> batteries I am charging the batteries to 13.8 V (sealed batteries to 13.5
V)
> Occasionally the non-sealed (non gel-type) batteries are charged to 14.4
V
> for a limited period.
> I would like to know when the batteries are discharged how much the charge
> is reduced in respect of the total charge available when the voltage
drops
> from 13.8 V (13.5V) to 12.5V.
> With the total charge available I mean the charge in Ah (Ampere*hour) from
> fully charged to discharged state , fully charged meaning 13.8 V ,
> discharged meaning a terminal voltage of 11.5 V .
> Although there is a lot of information available on the Web re lead-acid
> batteries , I haven't been able to find this info.
> Perhaps someone on this NG knows a site showing a graph 'Percentage
> Available Charge' against 'Battery Voltage' .
>
> TIA for any advice
>
> Frank gm0csz.kn6wh@ntlworld.com
>
>

3675. Re: Lead Acid Batteries charge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 19:35:48 UTC
From: gaschafer@attbi.com
Message-ID: <3cebf3ac.17632559@netnews.attbi.com>
Source record: 43969

Here is another site that has a lot of battery info on it.

http://www.uuhome.de/william.darden/

73
Gary K4FMX

3676. Re: HB 17 SSB on web

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 19:42:56 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3CEBF563.AB86BE13@bellatlantic.net>
Source record: 43968

Nice!

Bill Meara wrote:
>
> I've put on my web site some pictures of my homebrew 17 meter SSB
> transmitter and a general description of the rig.
>
> http://planeta.clix.pt/n2cqr
>
> Click on "17 meter Single Sideband project"
>
> I hope you find it interesting. Please send comments.
>
> 73 Bill CU2JL N2CQR
> Sao Miguel Island
> Azores Portugal
> 73 de Bill CU2JL N2CQR
> Sao Miguel Island, The Azores, Portugal
> 37.7 N 15.7 W
> http://planeta.clix.pt/n2cqr

3677. Re: N6WWW Home Page

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 19:55:27 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3CEBF853.10E69256@bellatlantic.net>
Source record: 43970
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur,rec.radio.amateur.homebrew

Neon Moon wrote:
>
> I actually posted this in a reply message in a thread, but thought I'd make
> a more general announcement as an invitation to everyone.
>
> I just finished my first ham radio page. Pretty simple stuff, but some nice
> links to some of my favorite QRP and Homebew sites amongst other stuff (a
> ULS link, and some other good ham radio pages on CW). Included also is a
> bit of my ham history (i'm a new ham, so it's a short history! LOL)
>
> Let me know what you think!
>
> Jason - N6WWW - November Six World Wide Web
>
> And for those on IRLP, you can catch me on Node 396
>
> (I'm actually monitoring right now for those hanging out online
> It's 4:25pm Pacific 5/20/02 right now)

So - what's the url for your page?

3678. Re: Minimum Loss Pad

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 20:36:48 UTC
From: James Horn <jimhorn@svn.net>
Message-ID: <3cebf350@news.svn.net>
Source record: 43966

OK - I spent some time with a notepad and got the following:

If Zin = input impedance and Zout = output impedance and Zout > Zin (if not, just swap 'em so it is true),

Find the impedance transform ratio, k=Zout/Zin (k>1). Find another constant: m=sqrt(k*k-k)

The pad has a resistor in parallel with the input with a value of:

Rparallel = Zin ((k+m)/(k+m-1))

It also has a resistor between the input and output with a value of:

Rseries = Zin * m

The loss of the pad in dB will be:

Loss(dB) = 10 log (k + (1+m)^2)

For example, I tried a Zin of 50 and Zout of 75 and got:
k=1.5; m=.866; Rparallel=86.6; Rseries=43.3; loss=7.2dB

Hope this helps...

Jim Horn, WB9SYN/6 (series / parallel resistances and algebra)

3679. Re: Minimum Loss Pad

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 20:39:16 UTC
From: James Horn <jimhorn@svn.net>
Message-ID: <3cebf3e4@news.svn.net>
Source record: 43967

Sorry I missed a detail - the calculations I showed are for unbalanced lines. For balanced lines, the series resistor is *two* resistors, each with half the value to make a symmetrical, balanced pad. In my example, Rseries is shown as 43.3 so you'd use two 21.6 ohm resistors, one on each side between the input and output (*not* a common grounded side).

Jim Horn, WB9SYN/6

3680. WANTED: Triad M-15 mod transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 21:12:13 UTC
From: Chuck O'Neal <coneal@ultranet.com>
Message-ID: <ach1k7$47j$1@bob.news.rcn.net>
Source record: 43972
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

HI!
Anyone have one of these things? It is a 30 Watt transformer made
by Triad. I have parts to trade or $$$ as well.
Thanks!
Chuck...

3681. Re: Minimum Loss Pad

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 21:26:29 UTC
From: James Horn <jimhorn@svn.net>
Message-ID: <3cebfef5@news.svn.net>
Source record: 43971

Not my day - the loss formula is wrong. It should be:

Loss (dB) = 10*log((k+m)^2/k)

or 5.72dB for the example.

Sorry folks! I have checked it against examples in my "Electronics Engineers' Handbook" and get the same results so my equation swinging seems to have finally hit the mark.

Jim Horn, WB9SYN/6

3682. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 21:45:24 UTC
From: RVMJ <RVMJ@Safety-&-Arming.Clara.co.uk>
Message-ID: <fb4oeu04n1l1h5a970auroobfjvqd7va0t@4ax.com>
Source record: 43974
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

Radio Ham wrote:

>In terms of the American involvement with the Japanese,
>the matter of Pearl Harbour, far from being a day of infamy,

CLAPTRAP!

--
from
RVMJ
Remove Safety-&-Arming before e-mailing

3683. Re: Lead Acid Batteries charge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 22:04:50 UTC
From: "G. Skiffington" <skiffing@nbnet.nb.ca>
Message-ID: <35661B8C.514A@nbnet.nb.ca>
Source record: 43975

Only sensible reply I've seen in awhile regards lead-acid batteries -
Hope Frank and others read it.

Gord - VE1AJF

3684. Re: N6WWW Home Page

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 22:39:56 UTC
From: N6WWW <neonmoonx@hotmail.com>
Message-ID: <07VG8.81598$UV4.134327@rwcrnsc54>
Source record: 43976
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur,rec.radio.amateur.homebrew

Oops!

It's http://n6www.cjb.net/

Let me know what you think of it. It was a hoot to setup.

Jason - N6WWW

--
****
N6WWW's Ham Pages - NEW!
Fantastic Message Boards on VHF/UHF,
QRP, Homebew, Trading, and more!
http://n6www.cjb.net/
****
<ehsjr@bellatlantic.net> wrote in message
news:3CEBF853.10E69256@bellatlantic.net...
>
>
> Neon Moon wrote:
> >
> > I actually posted this in a reply message in a thread, but thought I'd
make
> > a more general announcement as an invitation to everyone.
> >
> > I just finished my first ham radio page. Pretty simple stuff, but some
nice
> > links to some of my favorite QRP and Homebew sites amongst other stuff
(a
> > ULS link, and some other good ham radio pages on CW). Included also is
a
> > bit of my ham history (i'm a new ham, so it's a short history! LOL)
> >
> > Let me know what you think!
> >
> > Jason - N6WWW - November Six World Wide Web
> >
> > And for those on IRLP, you can catch me on Node 396
> >
> > (I'm actually monitoring right now for those hanging out online
> > It's 4:25pm Pacific 5/20/02 right now)
>
> So - what's the url for your page?

3685. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 23:14:26 UTC
From: w9wi@linux1.localdomain
Message-ID: <slrnaeo9nj.2lr.w9wi@linux1.localdomain>
Source record: 43977
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

On Wed, 22 May 2002 11:28:25 -0400, Fred Hambrecht <w4jle@charter.net> wrote:
>OK, pick it up on a crystal set and copy it. I was responding to the
>statement that a crystal set was best suited for CW, but could also pick up
>AM.
>
>I disagee with your premise that A1A is AM.
>
>Modulation implies adding audio to a carrier. Simply doing on/off keying
>adds no modulation (disregarding key clicks etc)

I would disagree with that statement...

Modulation implies adding *information* to a carrier. That information is
often audio, but it can be something else. Video (TV station), data
representing text (pagers), data representing God-knows-what (802.11
wireless LANs), whatever.

Text encoded in the International Morse Code is also valid information.
Information that's usually added to a carrier by turning that carrier on and
off. I don't think it's at all wrong to call that modulation, and the
parameter being modulated is certainly the amplitude.
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

3686. Re: Lead Acid Batteries charge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 23:37:03 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <m_VG8.8578$7M3.1981491@news11-gui.server.ntli.net>
Source record: 43978

From: "Bill Janssen" <billj@ieee.org>
Subject: Re: Lead Acid Batteries charge
Date: 22 May 2002 19:21

Frank Dinger wrote:

> Powering my Amateur Radio station and desk lighting from 12V lead-acid
> batteries I am charging the batteries to 13.8 V (sealed batteries to 13.5
V)
> Occasionally the non-sealed (non gel-type) batteries are charged to 14.4
V
> for a limited period.
> I would like to know when the batteries are discharged how much the charge
> is reduced in respect of the total charge available when the voltage
drops
> from 13.8 V (13.5V) to 12.5V.
> With the total charge available I mean the charge in Ah (Ampere*hour) from
> fully charged to discharged state , fully charged meaning 13.8 V ,
> discharged meaning a terminal voltage of 11.5 V .
> Although there is a lot of information available on the Web re lead-acid
> batteries , I haven't been able to find this info.
> Perhaps someone on this NG knows a site showing a graph 'Percentage
> Available Charge' against 'Battery Voltage' .
>
> TIA for any advice
==========

The best way to find this info. is by your own test. Put a known load on the
fully
charged battery and watch the voltage. when it gets to your cutoff volyage,
you
calculate the total amp hours.

The main problem is this will change as the battery ages.

Bill K7NOM
==========
> Only sensible reply I've seen in awhile regards lead-acid batteries -
> Hope Frank and others read it.
>
> Gord - VE1AJF
=======
Of course I did , I already am in the process of making an adjustable
(battery discharge) load based on an opamp ,some pass transistors and a
number of car headlight bulbs complete with a timer/counter such that I can
discharge any battery at a set rate (up to 10 amperes) down to a set

voltage.

Thanks to all responding to my above query for their advice .

For your info ,my station runs on 4 ea 75Ah (wet lead-acid 'leisure') battery, located on a well ventilated loft and a number of gel-type sealed batteries located in the shack . They are charged by a 150 Watts wind generator soon to be accompanied by 2 ea 64Wp Solar Panel. Wp= Watt (peak)

Frank gm0csz.kn6wh@ntlworld.com

3687. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-22 23:57:51 UTC
From: dplatt@radagast.org
Message-ID: <ueoc3vtfndeu07@corp.supernews.com>
Source record: 43979
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

In article <slrnaeo9nj.2lr.w9wi@linux1.localdomain>, Doug Smith <me> wrote:

>>I disagee with your premise that A1A is AM.
>>
>>Modulation implies adding audio to a carrier. Simply doing on/off keying
>>adds no modulation (disregarding key clicks etc)
>
>I would disagree with that statement...

I think the ITU modulation definitions tend to agree with your
disagreement ;-). I looked up http://www.itu.int/ars/rr/aps01.htm,
and the definition of the first "A" is specifically:

1.2 Emission in which the main carrier is amplitude-modulated
(including cases where sub-carriers are angle-modulated)

1.2.1 Double-sideband A

Normal CW Morse telegraphy is A1A - double-sideband amplitude
modulation of the carrier, carrying quantized/digital information
without the use of a modulating subcarrier, for telegraphy. This is
made pretty clear in the table down in Part B of the page I cited
above, in which CW Morse telegraphy is specifically listed among the
"Amplitude Modulation" examples.

Sending Morse by switching an audio tone (subcarrier) on and off, and
then amplitude-modulating this onto a carrier, would be A2A.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3688. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 00:21:15 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <ueodg6q0uk3731@corp.supernews.com>
Source record: 43980
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

Doug, I am not going to get into one of these pointless discussions where definitions are created to suit one's position.

You win pick up the marbles!

"Doug Smith " <w9wi@linux1.localdomain> wrote in message news:slrnaeo9nj.2lr.w9wi@linux1.localdomain...
> On Wed, 22 May 2002 11:28:25 -0400, Fred Hambrecht <w4jle@charter.net> wrote:
> >OK, pick it up on a crystal set and copy it. I was responding to the
> >statement that a crystal set was best suited for CW, but could also pick up
> >AM.
> >
> >I disagee with your premise that A1A is AM.
> >
> >Modulation implies adding audio to a carrier. Simply doing on/off keying
> >adds no modulation (disregarding key clicks etc)
>
> I would disagree with that statement...
>
> Modulation implies adding *information* to a carrier. That information is
> often audio, but it can be something else. Video (TV station), data
> representing text (pagers), data representing God-knows-what (802.11
> wireless LANs), whatever.
>
> Text encoded in the International Morse Code is also valid information.
> Information that's usually added to a carrier by turning that carrier on and
> off. I don't think it's at all wrong to call that modulation, and the
> parameter being modulated is certainly the amplitude.
> --
> Doug Smith W9WI
> Pleasant View (Nashville), TN EM66
> http://www.w9wi.com
>
>

3689. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 00:25:37 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <ueodo34g5j0dcd@corp.supernews.com>
Source record: 43981
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

So I guess I never really needed that BFO on the receiver, and I shudder to think how many receivers have an unnecessary CW position. We simply could have switched to AM and copied the amplitude modulated signal.... Right!

"Dave Platt" <dplatt@radagast.org> wrote in message news:ueoc3vtfndeu07@corp.supernews.com...
> In article <slrnaeo9nj.2lr.w9wi@linux1.localdomain>, Doug Smith <me> wrote:
>
> >>I disagee with your premise that A1A is AM.
> >>
> >>Modulation implies adding audio to a carrier. Simply doing on/off keying
> >>adds no modulation (disregarding key clicks etc)
> >
> >I would disagree with that statement...
>
> I think the ITU modulation definitions tend to agree with your
> disagreement ;-). I looked up http://www.itu.int/ars/rr/aps01.htm,
> and the definition of the first "A" is specifically:
>
> 1.2 Emission in which the main carrier is amplitude-modulated
> (including cases where sub-carriers are angle-modulated)
>
> 1.2.1 Double-sideband A
>
> Normal CW Morse telegraphy is A1A - double-sideband amplitude
> modulation of the carrier, carrying quantized/digital information
> without the use of a modulating subcarrier, for telegraphy. This is
> made pretty clear in the table down in Part B of the page I cited
> above, in which CW Morse telegraphy is specifically listed among the
> "Amplitude Modulation" examples.
>
> Sending Morse by switching an audio tone (subcarrier) on and off, and
> then amplitude-modulating this onto a carrier, would be A2A.
>
> --
> Dave Platt <dplatt@radagast.org> AE6EO
> Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
> I do _not_ wish to receive unsolicited commercial email, and I will
> boycott any company which has the gall to send me such ads!

3690. Re: Coil length and winding pitch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 01:36:43 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CEC47AB.65B2FF56@eznec.com>
Source record: 43982

Pitch is the center-to-center distance between adjacent turns, so the length = pitch * number of turns. If you want to get fussy about the length, I suppose you should add one wire diameter, that is, length = pitch * number of turns + wire diameter. This makes the assumption that the coil ends just overlap. I think most (or all) writers ignore the wire diameter business, since beyond a few turns it becomes insignificant.

The two turn coil in your example would then have a length of 2/16" + the wire diameter, the 8 turn coil 1/2" + the wire diameter.

Roy Lewallen, W7EL

Tom Bruhns wrote:
>
> Please humor me with a straight answer to what seems a simple
> question. If I wind a simple single layer RF coil, what is the
> winding pitch in terms of the coil length and the number of turns?
> Or, conversely, if I know the pitch and number of turns, what's the
> length? For instance, if I wind two turns on a 3/8"x16TPI bolt, so
> the pitch is 1/16", how long a coil does that two turns make? How
> long a coil is 8 turns wound on the same bolt?
>
> Cheers,
> Tom

3691. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 02:38:46 UTC
From: Brenda Ann <brandad@kornet.net>
Message-ID: <achjnhopg1@news1.kornet.net>
Source record: 43983
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

Allow me to elaborate on my poor choice of words:

When I said that a foxhole radio was better suited to CW reception, I was alluding to the fact that this type of radio has a very high distortion of AM signals, due to the nonlinearity of the detector junction, and the fact there is no filtering of the detected signal. And yes, you CAN copy CW with just a detector, no BFO, nothing. Early CW receivers had no BFO, the operator simply listened for the duration of the carrier wave (hiss).

"Fred Hambrecht" <w4jle@charter.net> wrote in message
news:uemaq16b38f212@corp.supernews.com...
> The only CW they could pick up would be MCW which is AM.
>
> "Brenda Ann" <brandad@kornet.net> wrote in message
> news:acf59d$64f$1@news1.kornet.net...
> > Foxhole radios are about the very simplest radio receiver possible.
>> These radios had neither selectivity (they
> > picked up whatever was closest) nor sensitivity. They were best suited
to
> > receiving CW (Morse) signals, although they did receive AM signals as
> well.

> > "Newbie" <newbie@nowhere.net> wrote in message
> > news:uem4hcmftj02a1@corp.supernews.com...
> > >
> > > "xpyttl" <xpyttl_nospam@earthling.net> wrote in message
> > > news:uelqa8q3if5a2f@corp.supernews.com...
> > > > "Gareth Rowlands" <gareth@lightfox.demon.co.uk> wrote in message
> > > >
> > > > > IIRC a razor blade was
> > > > > one of the principal components.
> > > >
> > > > Good heavens, you never made a "foxhole radio" when you were a Boy
> > Scout?
> > > A
> > > > razor blade, preferably a little rusty, and a pencil lead. They
used
> to
> > > > have blades that had bluing on them like a gun ... if I recall, they
> > > worked
> > > > extremely well, or maybe not at all, now I'm not so sure. I was
> > probably
> > > 8
> > > > or 9 at the time.

> > > >
> > > > ..
> > > >
> > > >
> > >
> > > How about a little "on the net" training in how to build a "foxhole
> > radio"?
> > >
> > >
> >
> >
>
>

3692. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 02:56:47 UTC
From: w9wi@linux1.localdomain
Message-ID: <slrnaeon83.3ho.w9wi@linux1.localdomain>
Source record: 43985
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

On Wed, 22 May 2002 20:25:37 -0400, Fred Hambrecht <w4jle@charter.net> wrote:
>So I guess I never really needed that BFO on the receiver, and I shudder to
>think how many receivers have an unnecessary CW position. We simply could
>have switched to AM and copied the amplitude modulated signal.... Right!

Your receiver, even if it doesn't have a BFO, is definitely reproducing the signal as it was transmitted. Imagine that you hooked a speaker in series with the code key at the transmitter. What would you hear? It wouldn't be a nice 700Hz keyed sine wave.

If you go back far enough, you see that there is some evidence that Morse never intended his telegraph code to be decoded by ear. It was to wiggle a pen on a moving strip of paper; Morse was intended to be decoded by eye. If that intent had survived to the invention of radio, a BFO would have been unnecessary; a BFO-less receiver could have driven the pen and delivered perfectly legible code. (it may also be instructive to note that the early wireline telegraph equipment had no BFO; the operators were actually able to copy the clicks and clacks...)

Today, you could build an IF-DSP receiver in which the appearance and disappearance of the carrier would be interpreted by the CPU as Morse elements. Perfect Morse could be displayed (within the limits of QRM, QRN, and the sending operator's fist!) without a BFO ever existing.

The BFO is an enhancement added to allow a human operator to read a code that was intended to be read by machine.
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

3693. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 03:00:03 UTC
From: Steve Terry <g4wwknospam@tesco.net>
Message-ID: <achm13$proj8$1@ID-139484.news.dfncis.de>
Source record: 43984
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

"Brenda Ann" <brandad@kornet.net> wrote in message
news:achjnhopg1@news1.kornet.net...
> Allow me to elaborate on my poor choice of words:
<snip>
> Early CW receivers had no BFO,
> the operator simply listened for the duration of the carrier wave (hiss).
<snip top post>
>
Early CW receivers were clockwork mechanical coherers.
The operator listened for the sounder ratio of dits and dars

As a schoolboy a group of us tried making the foxhole radio,
with razor blade and graphite pencil detector
Could never get it to work, had all had to resort an OA47 in the end

Steve Terry

3694. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 03:16:42 UTC
From: Brenda Ann <brandad@kornet.net>
Message-ID: <achlulvq1@news1.kornet.net>
Source record: 43986
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

For any crystal-type receiver, one had to have either a very close local ground wave, or a strong skywave. Or, alternately, a long enough antenna to catch what little was out there.

"Steve Terry" <g4wwknospam@tesco.net> wrote in message news:achm13$proj8$1@ID-139484.news.dfncis.de...
> "Brenda Ann" <brandad@kornet.net> wrote in message
> news:achjnhopg1@news1.kornet.net...
> > Allow me to elaborate on my poor choice of words:
> <snip>
> > Early CW receivers had no BFO,
> > the operator simply listened for the duration of the carrier wave (hiss).
> <snip top post>
> >
> Early CW receivers were clockwork mechanical coherers.
> The operator listened for the sounder ratio of dits and dars
>
> As a schoolboy a group of us tried making the foxhole radio,
> with razor blade and graphite pencil detector
> Could never get it to work, had all had to resort an OA47 in the end
>
> Steve Terry
>
>

3695. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 04:51:51 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3CEC7567.20890C33@clifto.com>
Source record: 43988
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

Russell C. Nixon wrote:
> Brian, you would be better off using a battery made for supplying a
> relatively small amount of current for a longer time. A car battery
> is optimized to supply a huge amount of current (100 to 200 amps) for
> a short time in order to turn the starter motor. When the car is
> running, its electrical needs are supplied by the alternator powered
> by the engine. Gel cells are really what you want.

I'm currently researching the idea of using deep-cycle marine batteries.
A huge battery is cheaper than the stupid little 12V 7AH battery my UPS
needs.

No, I won't be using the huge one with the teensy UPS. I have a pair of
huge old Elgars I got because the charging circuit was overcharging and
ruining the 4 12V 15AH batteries inside. I'm thinking of either repairing
and beefing up the charging circuitry or removing it entirely and kludging
in a real battery charger with some beef to it.

I could get four of the marine deep-cycle batteries cheaper than *one* of
the 12V 15AH batteries.

--
If spammers weren't stupid, they'd be the idle rich instead of spammers.
- Morely Dotes

3696. Still lookin' for used homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 04:53:20 UTC
From: N6WWW <neonmoonx@hotmail.com>
Message-ID: <3B_G8.89289$Po6.174944@rwcrnsc52.ops.asp.att.net>
Source record: 43987
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap

I'm still lookin' to buy a used hf transceiver or transmitter/receiver combo.

Something like the Pixie2 by H.S.C. or the GM40, WM-20 by Small Wonder Labs, the 49er by Norcal QRP Club, or the SP-750 from Lectrokit.

With my limited finances I thought it would be a great way to experience different modes (I've only used VHF/UHF FM), and I would love to find something that can help me learn how to homebrew while giving me a working example and some radio fun!

Thanks!

Jason - N6WWW

--
****
N6WWW's Ham Pages - NEW!
Fantastic Message Boards on VHF/UHF,
QRP, Homebew, Trading, and more!
http://n6www.cjb.net/
****

3697. an315 integrated circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 05:28:28 UTC
From: jorge <jormartin@recol.es>
Message-ID: <3cec7d61$1@news.airtel.net>
Source record: 43989

does one have the squematic of this ic audio. thanks

3698. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 10:51:13 UTC
From: "Copper.net" <davidw@copper.net>
Message-ID: <YQ3H8.34$vE4.31012@newsfeed.slurp.net>
Source record: 43990
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

I remember a QSO in the mid-fifties on 15 c-w, cross-mode to an a-m op in the Caribbean or SA, where the c-w sig was loud enough on the far end that the a-m op didn't need a bfo to copy ;o)

73, W, N3HE

3699. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 13:03:44 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3CECE8B0.D1B5CF76@crosslink.net>
Source record: 43991
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

"Clifton T. Sharp Jr." wrote:
>
> Russell C. Nixon wrote:
> > Brian, you would be better off using a battery made for supplying a
> > relatively small amount of current for a longer time....
>
> I'm currently researching the idea of using deep-cycle marine batteries.
> A huge battery is cheaper than the stupid little 12V 7AH battery my UPS
> needs......

I keep my ARES Packet Node on a "deep cycle" battery like Russell describes but got a wet cell intended for electric outboard motors vs a gel-cel cuz its mucho cheaper (<$50) than gel-cels of the same rating. I "float" it at 13.8V using a charger made for that purpose so, when (not if) the AC power fails the station doesn't even notice for at least 24 hours. IIRC the charger was well under $100US and has yet to over-charge the battery enough to require water.

The "house" batteries in our motorhome use the same system.

Also, just bought a smaller portable wet cell intended for lawn tractors from Walmart for $15! Figured the portability was worth that small price.

73 K3DWW

3700. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 13:06:11 UTC
From: Radio Ham <no.spam@no.spam>
Message-ID: <3cece9f4_3@mk-nntp-1.news.uk.worldonline.com>
Source record: 43992
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

In my home town of Portishead, I didn't need a BFO
to copy Portishead Radio, although it was a challenge
to read the inverse Morse caused by the fully quieting
of the keyed carrier and normal noise in the gaps.

Copper.net <davidw@copper.net> wrote in message
news:YQ3H8.34$vE4.31012@newsfeed.slurp.net...
> I remember a QSO in the mid-fifties on 15 c-w, cross-mode to an a-m op in
> the Caribbean or SA, where the c-w sig was loud enough on the far end that
> the a-m op didn't need a bfo to copy ;o)

3701. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 14:02:52 UTC
From: troglodite@aol.com
Message-ID: <20020523100252.06794.00000270@mb-mq.aol.com>
Source record: 43993

A friend of mine clued me in on an often overlooked source of good storage batteries. Just go to your local golf course and ask them if they have any old golf cart batteries. These are usually replaced when their capacity is only slightly diminished, and have plenty of life left to power radios, etc. The golf courses are GLAD to give them to you, as they are a disposal problem to them.

KB9TMY

3702. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 14:21:48 UTC
From: laborkei <laborkeiNOSPAM@hotmail.com>
Message-ID: <3cecff0c_5@nopics.sjc>
Source record: 43994
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

If you didn't make Dayton..

Mendelsons had 12V 17AH batteries for $10.00
They have them on there website for $15.95.
I had talked to them at Dayton and they said they had a lot of these
batteries, and they are New.

http://www.meci.com/

Hamvention 2002 Pictures de WD5BJQ: http://www.qsl.net/wd5bjq/hamvent02.htm

"Russell C. Nixon" <rcnixon@mindspring.com> wrote in message
news:3cea451b.2496549@news.mindspring.com...
> "Brian" <lea1bri@optusnet.com.au> wrote:
>
> >I don't know if anyone has seen the website I'm looking for (I hope they
> >have), but I've lost the link so I cant give it to anyone either.
> >Hoping someone can help me with the web address.
> >
> >The website is about a bloke in America (maybe Canada I can't remember).
He
> >is an amateur that lives in a zone where the power delivery isn't
fantastic.
> >To combat this he set up a car battery in a battery box with a volt meter
> >and a cigarette lighter socket built in (as well as big posts for his
radio
> >equipment). Apparently this wasn't good enough so he linked up a solar
> >system to it as well. There were a couple of other attachments also.
> >
> >Hoping someone can help me out with the address for it.
> >
> >Thanks in advance,
> >
> >Brian.
> >Sydney Australia.
>
> Brian, you would be better off using a battery made for supplying a
> relatively small amount of current for a longer time. A car battery
> is optimized to supply a huge amount of current (100 to 200 amps) for
> a short time in order to turn the starter motor. When the car is
> running, its electrical needs are supplied by the alternator powered
> by the engine. Gel cells are really what you want. They are sold for
> computer room uninterruptable power supplies (UPS) and camper vehicle
> use. Perhaps you can get them from a computer service company or just

> buy a couple of new ones. The gel cell have a charging power
> requirement similar to Nimh batteries and the charge control chips for
> Nimhs work well for gel cells. Do a web search for "gel cells" and
> you will get all you need! Also, do a web search for "Luke Enriquez".
> He is an Australian ham and engineer who has a nice design for a gel
> cell maintenance system.
>
> Russ
> "Two-fifteen, no ambulance needed!"
> Subtract all nines to reply

3703. Re: *Very OT* Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 14:37:50 UTC
From: ram <rmilne@aa.mbn.or.jp>
Message-ID: <acjti3sdc1@news.mbn.or.jp>
Source record: 44003
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

Vito wrote in message <3CEB980C.8E0AB9E8@crosslink.net>...
>Worse yet, modern Japanese still have shrines venerating the perp's of
>these atrocities! That's reality!
>

Just for the record this is not true. Today the 3 so-called 'war shrines' simply symbolize the war effort and visitors are paying respects to family or friends who were lost in the war (as you might reasonably expect to find in any other country).

For your information, my office for the last 12 years has been situated less than 100 meters from the largest "war shrine" (Yasukuni Jinja) and my car park is located within the grounds of the shrine itself (they operate a paid parking system for private vehicles to utilize spare land) so I walk through the shrine at least twice each day and have a good opportunity to gauge the atmosphere.

There is no veneration of the war in Japan and there is no basis for your comment.

regards, ram G0WMF / 7J1AUA

3704. Simple to build Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 15:06:52 UTC
From: Doctor <doctorwho20012001@yahoo.com>
Message-ID: <acj0d9$l2d$1@news.cowan.edu.au>
Source record: 43995
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

Dose anybody know of a simple but powful morse code transmitter circuit one can build.

I have heard where these circuits are interesting to build and simple in construction.

Thanks Craig

3705. Re: Lead Acid Batteries charge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 15:46:30 UTC
From: derek_toeppen@agilent.com
Message-ID: <2219e080.0205230746.6214f412@posting.google.com>
Source record: 43996

"Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote in message
news:<7pOG8.11349$D16.2527741@news6-win.server.ntlworld.com>...

Try

http://www.trojan-battery.com/dcmaint.pdf

> Powering my Amateur Radio station and desk lighting from 12V lead-acid
> batteries I am charging the batteries to 13.8 V (sealed batteries to 13.5 V)
> Occasionally the non-sealed (non gel-type) batteries are charged to 14.4 V
> for a limited period.
> I would like to know when the batteries are discharged how much the charge
> is reduced in respect of the total charge available when the voltage drops
> from 13.8 V (13.5V) to 12.5V.
> With the total charge available I mean the charge in Ah (Ampere*hour) from
> fully charged to discharged state , fully charged meaning 13.8 V ,
> discharged meaning a terminal voltage of 11.5 V .
> Although there is a lot of information available on the Web re lead-acid
> batteries , I haven't been able to find this info.
> Perhaps someone on this NG knows a site showing a graph 'Percentage
> Available Charge' against 'Battery Voltage' .
>
> TIA for any advice
>
> Frank gm0csz.kn6wh@ntlworld.com

3706. Re: 7360 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 16:04:25 UTC
From: Doug <doug@ycsi.net>
Message-ID: <acj3u9$m2t$0@63.90.193.178>
Source record: 43997

I wouldnt think twice about the 7360 in comparison to a solid state mixer. The tube is hard to keep balanced, requires attention often and is hard to replace. Not too many of them left floating around out in the market. The 7360 was replaced early on in several SSB rigs of older vintage by mods adding the diode ring modulator. They work well and have far better balance. I know the purists out there would love to see more tubes used in service, but as a lifelong technician, I'd go to the diodes in a heartbeat.

And, consider that AT&T used the ring mods by the millions for years in analog voice carriers and they served well. 4 ea, 406 or 404A diodes in a ring, drive them with just about a +7 DBM of carrier and you were off and running.

73

Doug, K7YD
Livingston, MT

"c.s.lee" wrote:

> Does anyone tell me about the dynamic range performance of a RCA 7360 valve
> mixer vis a vis a diode ring mixer in the front end of a short wave
> superheterodyne receiver?
>
> Lee - 6K2BTO

3707. Re: Simple to build Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 16:16:35 UTC
From: Mark Walsh <mark@km6xu.die.spam.die.com>
Message-ID: <acj4f9ioj1@bob.news.rcn.net>
Source record: 43998
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

"Doctor" <doctorwho20012001@yahoo.com> wrote:

> Dose anybody know of a simple but powful morse code
> transmitter circuit one can build.

> I have heard where these circuits are interesting to build
> and simple in construction.

Not sure what you mean by "powful," but the Ramsey
Electronics kits are great for learning. Minutes after I
finished my 40 meter transmitter, I worked a station
3,000 miles away...

http://www.ramseyelectronics.com/hk/hkarg.htm

3708. Re: 7360 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 17:40:24 UTC
From: arnoldg@c2i.net
Message-ID: <3ced2904.317234@news1.c2i.net>
Source record: 43999

On 23 May 2002 16:04:25 GMT, Doug <doug@ycsi.net> wrote:

>I wouldnt think twice about the 7360 in comparison to a solid state mixer.
>The tube is hard to keep balanced, requires attention often and is hard to
>replace. Not too many of them left floating around out in the market.

Fair Radio in Ohio have the 7360 NOS for $ 15.- each. I think that is
cheap, the usual price is much higher.

Regards,

Arnold Goksoyr

DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267
http://www.demostenes.no

Thousands of different valves in stock as well as
sockets,transformers,books,caps,resistors and
other components. Web site is updated every week.
You can order on-line.

3709. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 18:05:50 UTC
From: Richard G Amirault <amirault@shell01.TheWorld.com>
Message-ID: <GwKsxq.J4y@world.std.com>
Source record: 44000
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

In rec.radio.amateur.equipment Brian <lea1bri@optusnet.com.au> wrote:

: The website is about a bloke in America (maybe Canada I can't remember). He
: is an amateur that lives in a zone where the power delivery isn't fantastic.
: To combat this he set up a car battery in a battery box with a volt meter
: and a cigarette lighter socket built in (as well as big posts for his radio
: equipment). Apparently this wasn't good enough so he linked up a solar
: system to it as well. There were a couple of other attachments also.

I'm not sure what you have in mind. Do you want a solar powered battery?
or just a way to have a back up 12v supply?

Astron Power Supply makes a few of thier power supplies with a special
circuit (the -BB option) to attach a 12v battery. This turns the Astron
into a sort of 12v uniteruptable power supply. During 'normal' times the
power supply charges the battery, but if commercial power should fail the
battery takes over powering the equipment.

I have this setup running my APRS WX station. The BB option is a special
order from most retailers however (they usually don't stock them) As I
understand it, the special circuit not only charges the battery, but
protects the power supply when commercial power fails and power is drawn
from the battery. NOTE: I found out the hard way I had to reduce the
voltage on my Astron to keep from over charging my battery.

For information on solar (and all types of re-newable) energy check out
Home Power Magazine.

http://www.homepower.com

Richard in Boston, MA, USA
N1JDU

3710. Re: Power Connector Part Number for Swan & Siltronix

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 18:06:41 UTC
From: Skipp <skipp@pilotNOSPAMPLEASE.ucdavis.edu>
Message-ID: <acjb3h$9sm$2@woodrow.ucdavis.edu>
Source record: 44001
Cross-posted to: rec.radio.cb,rec.radio.amateur.swap,rec.radio.amateur.homebrew

Re: Swan and Siltronix Radio replacement power cables.
"The current 12 pin "Cinch-Jones" power cable socket part number."

Cinch-Jones no longer makes this connector "socket." I do a lot of Swan and Siltronix radio work, so I've done the home work for you. Molex sells the same type connector.

Just for your mental notes...

The Siltronix and Swan power connector 12 pin socket is available from Newark as part number 14F2451

This is a current Molex 3300 Series Socket with Cable Clamp S-3312-CCT

OK you Swan and Siltronix guys... have at. If you haven't been by the Swan Siltronix web page yet, you can find it on the

http://sonic.ucdavis.edu Amateur Radio Page, about half way down.

cheers
skipp@pilotNOSPAMPLEASE.ucdavis.edu (take the NOSPAMPLEASE out)

http://sonic.ucdavis.edu
http://sonic.ucdavis.edu/siltronix (direct to the Swan Siltronix pages)

[Enjoyed the Dayton Hamfest this year, caught a cold from one of you guys... but I'm past it now.]

3711. Re: N6WWW Home Page

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-23 21:52:23 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3CED6537.58F8D69D@bellatlantic.net>
Source record: 44002
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur,rec.radio.amateur.homebrew

N6WWW wrote:
>
> Oops!
>
> It's http://n6www.cjb.net/
>
> Let me know what you think of it. It was a hoot to setup.
>

I enjoyed the page - thanks for the url.

> Jason - N6WWW
>
> --
> **********
> N6WWW's Ham Pages - NEW!
> Fantastic Message Boards on VHF/UHF,
> QRP, Homebew, Trading, and more!
> http://n6www.cjb.net/
> **********
> <ehsjr@bellatlantic.net> wrote in message
> news:3CEBF853.10E69256@bellatlantic.net...
> >
> >
> > Neon Moon wrote:
> > >
> > > I actually posted this in a reply message in a thread, but thought I'd
> make
> > > a more general announcement as an invitation to everyone.
> > >
> > > I just finished my first ham radio page. Pretty simple stuff, but some
> nice
> > > links to some of my favorite QRP and Homebew sites amongst other stuff
> (a
> > > ULS link, and some other good ham radio pages on CW). Included also is
> a
> > > bit of my ham history (i'm a new ham, so it's a short history! LOL)
> > >
> > > Let me know what you think!
> > >
> > > Jason - N6WWW - November Six World Wide Web
> > >
> > > And for those on IRLP, you can catch me on Node 396
> > >

> > > (I'm actually monitoring right now for those hanging out online
> > > It's 4:25pm Pacific 5/20/02 right now)
> >
> > So - what's the url for your page?

3712. Re: Simple to build Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 00:17:30 UTC
From: N6WWW <neonmoonx@hotmail.com>
Message-ID: <uEfH8.91815$UV4.159997@rwcrnsc54>
Source record: 44004
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

Ramsey kits are great... and I have links to other homebew sites off of
mine:

http://n6www.cjb.net

Jason - N6WWW

--
****
N6WWW's Ham Pages - NEW!
Fantastic Message Boards on VHF/UHF,
QRP, Homebew, Trading, and more!
http://n6www.cjb.net/
****
"Doctor" <doctorwho20012001@yahoo.com> wrote in message
news:acj0d9$l2d$1@news.cowan.edu.au...
> Dose anybody know of a simple but powful morse code transmitter circuit
one
> can build.
>
> I have heard where these circuits are interesting to build and simple in
> construction.
>
> Thanks Craig
>
>

3713. JFET Audio Mute Switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 02:15:13 UTC
From: w.harbourjr@worldnet.att.net
Message-ID: <deafe3d9.0205231815.4cbb331c@posting.google.com>
Source record: 44005

I've got an MPF102 mute switch in between my NE5532 preamp and a LM386 in the audio chain of a simple superhet xcvr. I'm using the T/R switch from the SW30+ qrp rig. The final PA in the transmitter chain is a 74HC240 which is putting out about 1/2 watt. On transmit the audio signal is blowing by the FET (the FET will not mute...or only slightly) and is ear splitting loud. I tried another FET there but it did even worse. Obviously the NE5532 is putting out more than the FET can block. Is there another FET I could use there and still hear some side tone leak through??

Your help is greatly appreciated!

Bill
KD4PWB

3714. Re: an315 integrated circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 02:17:18 UTC
From: Robert Mozeleski <moz@ncx.com>
Message-ID: <uerbsae0fnvla9@corp.supernews.com>
Source record: 44009

I think subs are AN7154,ECG1240,NTE1369.

"jorge" <jormartin@recol.es> wrote in message news:3cec7d61$1@news.airtel.net...
> does one have the squematic of this ic audio. thanks
>
>

3715. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 02:59:39 UTC
From: JB <ac6tk@nospamcybertime.net>
Message-ID: <acms56$10j5$1@madmax.keyway.net>
Source record: 44032
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

17AH gel cells will barely run an HT. High current drains are
impractical because gassing within the cells insulates the plates
faster than the gel can absorb and causes the internal resistance to
rise out of hand. Current drains should be limited to 20% of AH
rating (and with boat batteries too).

Big as you can get (into your tray) Marine/Starting batteries are a
pretty good compromise if you have to use it in your car.

Jim, ac6tk

"laborkei" <laborkeiNOSPAM@hotmail.com> wrote in message news:3cecff0c_5@nopics.sjc...
: If you didn't make Dayton..
:
: Mendelsons had 12V 17AH batteries for $10.00
: They have them on there website for $15.95.
: I had talked to them at Dayton and they said they had a lot of these
: batteries, and they are New.
:
: http://www.meci.com/
:
: Hamvention 2002 Pictures de WD5BJQ: http://www.qsl.net/wd5bjq/hamvent02.htm
:
:
: "Russell C. Nixon" <rcnixon@mindspring.com> wrote in message
: news:3cea451b.2496549@news.mindspring.com...
: > "Brian" <lea1bri@optusnet.com.au> wrote:
: >
: > >I don't know if anyone has seen the website I'm looking for (I hope they
: > >have), but I've lost the link so I cant give it to anyone either.
: > >Hoping someone can help me with the web address.
: > >
: > >The website is about a bloke in America (maybe Canada I can't remember).
: He
: > >is an amateur that lives in a zone where the power delivery isn't
: fantastic.
: > >To combat this he set up a car battery in a battery box with a volt meter
: > >and a cigarette lighter socket built in (as well as big posts for his
: radio
: > >equipment). Apparently this wasn't good enough so he linked up a solar
: > >system to it as well. There were a couple of other attachments also.
: > >
: > >Hoping someone can help me out with the address for it.

: > >
: > >Thanks in advance,
: > >
: > >Brian.
: > >Sydney Australia.
: >
: > Brian, you would be better off using a battery made for supplying a
: > relatively small amount of current for a longer time. A car battery
: > is optimized to supply a huge amount of current (100 to 200 amps) for
: > a short time in order to turn the starter motor. When the car is
: > running, its electrical needs are supplied by the alternator powered
: > by the engine. Gel cells are really what you want. They are sold for
: > computer room uninterruptable power supplies (UPS) and camper vehicle
: > use. Perhaps you can get them from a computer service company or just
: > buy a couple of new ones. The gel cell have a charging power
: > requirement similar to Nimh batteries and the charge control chips for
: > Nimhs work well for gel cells. Do a web search for "gel cells" and
: > you will get all you need! Also, do a web search for "Luke Enriquez".
: > He is an Australian ham and engineer who has a nice design for a gel
: > cell maintenance system.
: >
: > Russ
: > "Two-fifteen, no ambulance needed!"
: > Subtract all nines to reply
:
:

3716. FS: RCA RC-24 RECEIVING TUBE MANUAL 1965

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 03:07:39 UTC
From: rlucch2098@aol.com
Message-ID: <20020523230739.29566.00000173@mb-de.aol.com>
Source record: 44006

Hi all;
This Handy RCA Tube book is the Tech Series RC-24. It has 14 chapters with 576 pages, measures 5-1/2"w x 8"h. There is More info then you'll probably ever need like Basing Diagrams, Theory, Supplies, Schematics & circuits. It was printed in Oct, 1965. It is in Excellent Condition and all intact with NO loose pages but it will need a bit of glueing at the binding.
Price is $20.00ppd Conus
Pic>>

http://www.myradioroom.com/rcatubebook.jpg

Thanks es 73..........RICH-WA2RQY RLUCCH2098@aol.com
Manual Copies @ http://www.myradioroom.com/manualsale.html
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

3717. FS: Tektronics model 191 Constant Amplitude Sig. Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 03:08:21 UTC
From: rlucch2098@aol.com
Message-ID: <20020523230821.29566.00000176@mb-de.aol.com>
Source record: 44007

Hi Fellas;
I have for SALE:
A real nice, removed from service, Tektronics 191 Signal Generator w/copy of manual for $200 + UPS
I an not a tech but I did confirm that a signal was heard in my Short Wave receiver on each of the units ranges. All I have it what you see, nothing else.
I suspect if it needs a few adjustments & calibration, the buyer will know how to oerform these tasks, Hi!

http://www.myradioroom.com/tek191sg-1.jpg

http://www.myradioroom.com/tek191sg-2.jpg

Thanks es 73..........RICH-WA2RQY RLUCCH2098@aol.com
Manual Copies @ http://www.myradioroom.com/manualsale.html
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

3718. FS: A pair ea. of Johnson & Cardwell Ceramic Sockets!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 03:08:47 UTC
From: rlucch2098@aol.com
Message-ID: <20020523230847.29566.00000177@mb-de.aol.com>
Source record: 44008

Hi Fellas;
I have for SALE:
1)- Pair of Brand NOS Johnson Ceramic Sockets for 866A type tubes, Price is $30ppd>>

http://www.myradioroom.com/johnson866sockets.jpg

2)- Pair of real-clean (used?)CARDWELL sockets but I have no idea what they are for? they are 4 pins type with locating groove for a pin, the ceramic measures 3-3/8" x about .282" thick. The Inside dia on the Aluminum is about 1-7/8" and about 1-1/4" high.
Price is $25.00ppd>>

http://www.myradioroom.com/cardwellsockets.jpg

Thanks es 73...........RICH-WA2RQY RLUCCH2098@aol.com
Manual Copies @ http://www.myradioroom.com/manualsale.html
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

3719. Re: JFET Audio Mute Switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 05:31:33 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CEDD035.E8648E2D@eznec.com>
Source record: 44010

Your preamp is probably swinging rail-to-rail in response to the transmitted signal. One thing I've done is to put a couple of back-to-back diodes across the preamp stage feedback resistor. This limits its swing to a level the FET can handle. Unless you somehow limit the output swing of the preamp, you'll have a lot of trouble finding a FET to handle it.

I used this scheme in the "Optimized QRP Transceiver" described in August 1980 QST.

Roy Lewallen, W7EL

Bill Harbour wrote:
>
> I've got an MPF102 mute switch in between my NE5532 preamp and a LM386
> in the audio chain of a simple superhet xcvr. I'm using the T/R
> switch from the SW30+ qrp rig. The final PA in the transmitter chain
> is a 74HC240 which is putting out about 1/2 watt. On transmit the
> audio signal is blowing by the FET (the FET will not mute...or only
> slightly) and is ear splitting loud. I tried another FET there but it
> did even worse. Obviously the NE5532 is putting out more than the FET
> can block. Is there another FET I could use there and still hear some
> side tone leak through??
>
> Your help is greatly appreciated!
>
> Bill
> KD4PWB

3720. FS: 6U5 NOS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 10:57:15 UTC
From: arnoldg@c2i.net
Message-ID: <3cee1c41.3651708@news1.c2i.net>
Source record: 44011
Cross-posted to: rec.audio.marketplace,rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hi,

I have some 6U5 magic eye valves in stock. They are unused and in
original boxes. The label is Haltron, but I am pretty sure that they
are rebranded US manufacture. The price is NOK 186.70 each and that is
about US$ 21.60

Regards,

Arnold Goksyr

DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267
http://www.demostenes.no

Thousands of different valves in stock as well as
sockets,transformers,books,caps,resistors and
other components. Web site is updated every week.
You can order on-line.

3721. Re: FS: 6U5 NOS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 11:00:21 UTC
From: arnoldg@c2i.net
Message-ID: <3cee1ce1.3811905@news1.c2i.net>
Source record: 44012
Cross-posted to: rec.audio.marketplace,rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

On Fri, 24 May 2002 10:57:15 GMT, arnoldg@c2i.net (DEMOSTENES A.
Goks&#65533;yr) wrote:
>Hi,
>
>I have some 6U5 magic eye valves in stock. They are unused and in
>original boxes. The label is Haltron, but I am pretty sure that they
>are rebranded US manufacture. The price is NOK 186.70 each and that is
>about US$ 21.60

Sorry, wrong price in US$. The correct price is NOK 186.70 and today
this is about US$ 23.-

Arnold
DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267
http://www.demostenes.no

Thousands of different valves in stock as well as
sockets,transformers,books,caps,resistors and
other components. Web site is updated every week.
You can order on-line.

3722. Re: Back up Power - charger voltage

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 12:20:54 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3CEE3026.1E751A08@crosslink.net>
Source record: 44013
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

Richard G Amirault wrote:
>
> .... I found out the hard way I had to reduce the
> voltage on my Astron to keep from over charging my battery.
>

Hey, Richard,

What voltage setting did you end up using? I spent $toomany on a
"smart" charger but I have a couple older PS's about that I'd like to
use like you do the Astron.
TIA
K3DWW

3723. Re: *Very OT* Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 12:35:13 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3CEE3381.FE7F163C@crosslink.net>
Source record: 44014
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

ram wrote:
>
> Vito wrote in message <3CEB980C.8E0AB9E8@crosslink.net>...
> >Worse yet, modern Japanese still have shrines venerating the perp's of
> >these atrocities! That's reality!
> >
>
> Just for the record this is not true. Today the 3 so-called 'war shrines'
> simply symbolize the war effort and visitors are paying respects to family
> or friends who were lost in the war (as you might reasonably expect to find
> in any other country).....

I was told that these shrines commemorated the officers who ordered and
the men who perp'd these atrocities; this by an American also living in
Japan. If that is untrue then I was misinformed. Sorry.
K3DWW

3724. Re: JFET Audio Mute Switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 12:47:22 UTC
From: w.harbourjr@worldnet.att.net
Message-ID: <deafe3d9.0205240447.647d2f8a@posting.google.com>
Source record: 44015

Roy Lewallen <w7el@eznec.com> wrote in message news:<3CEDD035.E8648E2D@eznec.com>...
> Your preamp is probably swinging rail-to-rail in response to the
> transmitted signal. One thing I've done is to put a couple of
> back-to-back diodes across the preamp stage feedback resistor. This
> limits its swing to a level the FET can handle. Unless you somehow limit
> the output swing of the preamp, you'll have a lot of trouble finding a
> FET to handle it.
>
> I used this scheme in the "Optimized QRP Transceiver" described in
> August 1980 QST.
>
> Roy Lewallen, W7EL
>
> Bill Harbour wrote:
> >
> > I've got an MPF102 mute switch in between my NE5532 preamp and a LM386
> > in the audio chain of a simple superhet xcvr. I'm using the T/R
> > switch from the SW30+ qrp rig. The final PA in the transmitter chain
> > is a 74HC240 which is putting out about 1/2 watt. On transmit the
> > audio signal is blowing by the FET (the FET will not mute...or only
> > slightly) and is ear splitting loud. I tried another FET there but it
> > did even worse. Obviously the NE5532 is putting out more than the FET
> > can block. Is there another FET I could use there and still hear some
> > side tone leak through??
> >
> > Your help is greatly appreciated!
> >
> > Bill
> > KD4PWB

OK Roy..that makes sense and is an easy fix. I've seen that in so
many audio circuits of QRP transceivers and it should have made me
take notice.

Thanks!!!

Bill

3725. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 12:59:44 UTC
From: Radio Ham <no.spam@no.spam>
Message-ID: <3cee391a$1_3@mk-nntp-1.news.uk.worldonline.com>
Source record: 44016
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

OK! Time to discuss the USA atrocities during their
invasion of Vietnam, rapes, massacres, etc.

Also, any war shrine or memorial is a hideous thing.
Anyone who goes around the world fully prepared
to wound and kill his fellow man has only himself
to blame if the tables are turned on him.
To commemorate such deaths is to glorify
the organised murder that is war.

Vito <vito@crosslink.net> wrote in message
news:3CEE3381.FE7F163C@crosslink.net...
> > Vito wrote in message <3CEB980C.8E0AB9E8@crosslink.net>...
> > >Worse yet, modern Japanese still have shrines venerating the perp's of
> > >these atrocities! That's reality!
> > Just for the record this is not true. Today the 3 so-called 'war
shrines'
> > simply symbolize the war effort and visitors are paying respects to
family
> > or friends who were lost in the war (as you might reasonably expect to
find
> > in any other country).....
> I was told that these shrines commemorated the officers who ordered and
> the men who perp'd these atrocities; this by an American also living in
> Japan. If that is untrue then I was misinformed. Sorry.
> K3DWW

3726. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 13:34:35 UTC
From: "M.J.Powell" <mike@pickmere.demon.co.uk>
Message-ID: <8x9NWIArFk78Ew1E@pickmere.demon.co.uk>
Source record: 44019
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

In article <3cee391a$1_3@mk-nntp-1.news.uk.worldonline.com>, Radio Ham
<no.spam@no.spam> writes
>OK! Time to discuss the USA atrocities during their
>invasion of Vietnam, rapes, massacres, etc.
>
>Also, any war shrine or memorial is a hideous thing.
>Anyone who goes around the world fully prepared
>to wound and kill his fellow man has only himself
>to blame if the tables are turned on him.
> To commemorate such deaths is to glorify
>the organised murder that is war.

How fortunate you are to be free enough to write the above.

Mike
--
M.J.Powell

3727. Re: Back up Power - charger voltage

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 13:47:00 UTC
From: Richard G Amirault <amirault@shell01.TheWorld.com>
Message-ID: <GwMBMC.L89@world.std.com>
Source record: 44017
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

It was so long ago I forget. I contacted the manufacturer of my "deep
cycle / marine" battery and asked them for the long term float voltage and
set it to that.

I *still* have to monitor the liquid level, but it does not disapear
anywhere near as fast now.

In rec.radio.amateur.equipment Vito <vito@crosslink.net> wrote:
: Richard G Amirault wrote:
:>
:> .... I found out the hard way I had to reduce the
:> voltage on my Astron to keep from over charging my battery.
:>

: Hey, Richard,

: What voltage setting did you end up using? I spent $toomany on a
: "smart" charger but I have a couple older PS's about that I'd like to
: use like you do the Astron.

3728. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 13:59:05 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <ueshpbrm8fgc6@corp.supernews.com>
Source record: 44018
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

Now your tap dancing on my last nerve. I feel a flash back coming on...

Perhaps we should continue this conversation up close and personal.

Your friend
Fred W4JLE

<no.spam@no.spam> wrote in message
news:3cee391a$1_3@mk-nntp-1.news.uk.worldonline.com...
> OK! Time to discuss the USA atrocities during their
> invasion of Vietnam, rapes, massacres, etc.
>
> Also, any war shrine or memorial is a hideous thing.
> Anyone who goes around the world fully prepared
> to wound and kill his fellow man has only himself
> to blame if the tables are turned on him.
> To commemorate such deaths is to glorify
> the organised murder that is war.
>
> Vito <vito@crosslink.net> wrote in message
> news:3CEE3381.FE7F163C@crosslink.net...
> > > Vito wrote in message <3CEB980C.8E0AB9E8@crosslink.net>...
> > > >Worse yet, modern Japanese still have shrines venerating the perp's
of
> > > >these atrocities! That's reality!
> > > Just for the record this is not true. Today the 3 so-called 'war
> shrines'
> > > simply symbolize the war effort and visitors are paying respects to
> family
> > > or friends who were lost in the war (as you might reasonably expect to
> find
> > > in any other country).....
> > I was told that these shrines commemorated the officers who ordered and
> > the men who perp'd these atrocities; this by an American also living in
> > Japan. If that is untrue then I was misinformed. Sorry.
> > K3DWW
>
>

3729. Re: JFET Audio Mute Switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 15:52:49 UTC
From: "Sverre Holm (LA3ZA)" <la3za@qsl.net>
Message-ID: <lltH8.4588$fG3.164170@news2.ulv.nextra.no>
Source record: 44020

You could also mute the LM386 by connecting the bypass pin (# 7) to either Vcc or ground via a transistor switch, or a diode from a supply that switches between rx/tx.

The Optimist QRP 80 SSB tranceiver from SM6LKM uses that (to Vcc), see http://home.swipnet.se/~w-41522/qrproot.html

This would work fine, unless of course you want to use the LM386 for a sidetone output during transmit.

Sverre Holm
LA3ZA
www.qsl.net/la3za

3730. Re: Back up Power - charger voltage

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 16:17:51 UTC
From: Mark Walsh <mark@km6xu.die.spam.die.com>
Message-ID: <acloth$k8i$1@bob.news.rcn.net>
Source record: 44021
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

"Vito" <vito@crosslink.net> wrote:
> Richard G Amirault wrote:

> > .... I found out the hard way I had to reduce the
> > voltage on my Astron to keep from over charging my battery.

> What voltage setting did you end up using? I spent $toomany on a
> "smart" charger but I have a couple older PS's about that I'd like to
> use like you do the Astron.

Industry standard float voltage is 2.3 volts per cell.
That's 13.8 volts for a twelve-volt lead-acid battery.
We use 54.something volts for a 48 volt string in telecom.

3731. Cleaning up the Shack.....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 16:41:41 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3CEE6D45.1080908@charter.net>
Source record: 44022

http://www.angelfire.com/nb/ni4l/lwtuner.jpg.JPG
Nice home brew antenna tuner. easy handle legal limit
will work on coax or a long wire.
80.00 + shipping m/o paypal or cashier check.

For sale nice 250 all mode swan 250 6 meter rig with power supply
Have book and prints. work fine looks good a few little scratches on the
face nothing bad though. 275.00 + shipping m/o pay pal or cashier check
http://www.angelfire.com/nb/ni4l/swan250.jpg.JPG

450 Shure desk mic in good shape.
35.00 + shipping M/O pay pal or cashiers check

B&W Low pass filter model 425 ex condition.
20.00 + shipping M/O pay pal cashier check

Have 5 brand new GE 6LR6 tubes.
30.00 each.
M/O pay pal or cashier check

2 NEW IN THE BOX CHINESE 811A TUBES 22.50 EACH + SHIPPING.
M/O pay pal or cashiers check

FS ATLAS 210X base/mobile unit with power supply and external hard to
find frequency counter. in good shape.
210.00 + shipping
M/O pay pal or cashiers check

2 used GE 8950 tested they produce full output 30.00 each + shipping.

--
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Click here for more info... http://www.angelfire.com/nb/ni4l/

3732. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 17:05:32 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3CEE72DC.FEE44DFC@crosslink.net>
Source record: 44023
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

Radio Ham wrote:
>
> OK! Time to discuss the USA atrocities during their
> invasion of Vietnam, rapes, massacres, etc.
>

I will be happy to help you conquer your ignorance but not on either NG.
Tnx
K3DWW

3733. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 17:45:48 UTC
From: Tinker <hamguy@yahoo.com>
Message-ID: <mvuseuot9p4u6k9htja26na7vfnkd6hd08@4ax.com>
Source record: 44024
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

On Fri, 24 May 2002 13:59:44 +0100, "Radio Ham" <no.spam@no.spam>
wrote:

>OK! Time to discuss the USA atrocities during their
>invasion of Vietnam, rapes, massacres, etc.

OR

We could discuss atrocities by the British in Northern Ireland,
perhaps ?

3734. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 17:54:00 UTC
From: lucifer@eternal-flames.gov
Message-ID: <3cee7ced.3885820@news.btinternet.com>
Source record: 44025
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

On Fri, 24 May 2002 13:59:44 +0100, "Radio Ham" <no.spam@no.spam>
wrote:

>OK! Time to discuss the USA atrocities during their
>invasion of Vietnam, rapes, massacres, etc.

Atrocities.... You mean like those committed during the Japanese
invasion of Manchuria in the early 1930's ? Rapes. Torture.
Massacres..... That sort of thing.

Is that why you changed the subject again. You start spouting your
strange version of WW2 history and then immediately change to an
entirely different conflict....

Old Nick

p.s. Like most others RH can't win an argument with, I'm in the
'kill-file' of this great paragon/parasite* of free speech....

* delete as appropriate.

3735. High performance Rx's

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 19:15:30 UTC
From: Duncan Clark <NEWS@[127.0.0.1]>
Message-ID: <yKP+UEDSFp78Ewmo@ntlworld.com>
Source record: 44026

Hi Folks,

For those of you looking to build a K2 or whatever for a high performance rx take a look at the following just being described in the UK's Radcom:

http://www.warc.org.uk/cdg2000%20files/release1/CDG2000.htm

i.e.

"We do not claim that this is the last word in analogue circuitry. That, most definitely, it is not; in spite of those who say that analogue circuitry is dead. It is however designed to offer the best performance we could achieve with a design that is reproducible, and on a practical note, its modularity lends itself to replacement of modules with others as time progresses. Unlike many commercial transceivers, it does not offer unlimited bells and whistles, many of which, on inspection, appear to be no more than sales gimmicks, but we have included those features that we consider to enhance operation. What it does do is to beat the pants off most of them in regard to performance. Receive IP3 (third order intercept) is about +40dBm. Noise figure is around 10dB. On SSB, 10dB(S+N)/N is about 0.22uV (-120dBm). Its oscillator phase noise levels and close in performance achieve -140 dBc/Hz at 9KHz offset from carrier and -150 dBc/Hz at just over 20 kHz on the 20 metre band"

"On SSB this gives a noise floor of (-174+10*log(2200)+10)dBm, or −130dBm [3]. With an IP3 of +40dBm and a noise floor of −130 dBm, this gives an IP3 dynamic range of 113dB using the formula: IP3 DR = 2/3*(IP3-MDS)."

Duncan
G4ELJ
--
Support bacteria. They are the only culture some people have.

Duncan Clark

3736. Re: Back up Power - charger voltage

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 20:09:49 UTC
From: derek_toeppen@agilent.com
Message-ID: <2219e080.0205241209.36db609a@posting.google.com>
Source record: 44027
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

Vito <vito@crosslink.net> wrote in message news:<3CEE3026.1E751A08@crosslink.net>...

13.2 to 13.6 volts as a general rule. See

http://www.trojan-battery.com/customercare_batterymaint9.html

Derek Toeppen, WA0ZTI

> Richard G Amirault wrote:
> >
> > .... I found out the hard way I had to reduce the
> > voltage on my Astron to keep from over charging my battery.
> >
>
> Hey, Richard,
>
> What voltage setting did you end up using? I spent $toomany on a
> "smart" charger but I have a couple older PS's about that I'd like to
> use like you do the Astron.
> TIA
> K3DWW

3737. Re: High performance Rx's

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 22:48:37 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CEEC3A8.22E5@pop.removethistomailme.net>
Source record: 44028

Duncan Clark wrote:
>
> Hi Folks,
>
> For those of you looking to build a K2 or whatever for a high
> performance rx take a look at the following just being described in the
> UK's Radcom:
>
> http://www.warc.org.uk/cdg2000%20files/release1/CDG2000.htm

Wow, those prototypes are nice-looking. What type of display module was
used in "Dave's" rig?

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3738. Re: Simple to build Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-24 23:17:44 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0205241517.1ec5be4f@posting.google.com>
Source record: 44029
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

"Doctor" <doctorwho20012001@yahoo.com> wrote in message
news:<acj0d9$l2d$1@news.cowan.edu.au>...
> Dose anybody know of a simple but powful morse code transmitter circuit one
> can build.
>
> I have heard where these circuits are interesting to build and simple in
> construction.
>
> Thanks Craig

I guess most of the solid state kits are probably more practical than
tubes these days. But you can get a fair amount of power out of just a
simple tube setup. The problem is it's sort of hard to find tube parts
these days. Used to, any junk tv had most of the parts to build a
simple transmitter. "transformer, etc".
Just a simple 6v6 circuit as the one in the old 1949 arrl handbook can
put out a good bit of power compared to a QRP solid state kit. I built
two versions of that when I was a novice. With a single 6146 and a
capable power supply you can do an easy 50 watts output. This is the
main circuit behind an old heath DX-60 as an example. But these
days it's probably more practical to build a solid state amp to go
behind the solid state QRP transmitter. Either that or rebuild an old
boatanchor CW rig. There are loads on e-bay I bet. IE: heath
dx-20,40,60's. Viking rangers, etc, etc. MK

3739. Re: Simple to build Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-25 00:13:53 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CEED741.4D250670@netscape.net>
Source record: 44030
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

Mark Keith wrote:
>
> "Doctor" <doctorwho20012001@yahoo.com> wrote in message
news:<acj0d9$l2d$1@news.cowan.edu.au>...
> > Dose anybody know of a simple but powful morse code transmitter circuit one
> > can build.
> >
> > I have heard where these circuits are interesting to build and simple in
> > construction.
> >
> > Thanks Craig
>
> I guess most of the solid state kits are probably more practical than
> tubes these days. But you can get a fair amount of power out of just a
> simple tube setup. The problem is it's sort of hard to find tube parts
> these days. Used to, any junk tv had most of the parts to build a
> simple transmitter. "transformer, etc".
> Just a simple 6v6 circuit as the one in the old 1949 arrl handbook can
> put out a good bit of power compared to a QRP solid state kit. I built
> two versions of that when I was a novice. With a single 6146 and a
> capable power supply you can do an easy 50 watts output. This is the
> main circuit behind an old heath DX-60 as an example. But these
> days it's probably more practical to build a solid state amp to go
> behind the solid state QRP transmitter. Either that or rebuild an old
> boatanchor CW rig. There are loads on e-bay I bet. IE: heath
> dx-20,40,60's. Viking rangers, etc, etc. MK

The problem with DX-20s, etc is their 'collector value' nowadays. They
used to be nice for a starter rig but nowadays that has gotten
impractical.
Somewhere on the web there's a set of good instructions to recreate the
Ameco AC-1...which these days might snatch $100+ on tha'bay.
As for a solid-state QRP rig, yes thats much easier but any significant
power requires a bit of savvy to overcome the homebrew oddities that
creep up in the amp stages, often at the immediate cost of a new
(expensive) power transistor. The plus side is that if you've never
worked QRP before you'll be thrilled at the contacts you can make with
one watt or so and thats a very rewarding experience.
All that being said, homebrewing a simple tube rig is probably the
better option if you have access to some junkbox parts. I'd stay away
from the old-timey one-tube jobs unless you just like the sound of a
chirpy signal...ie forget about the one-tube 813 MOPA designs.
-Bill WX4A

3740. Re: Back up Power - charger voltage

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-25 01:02:53 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3ceee021.478823@news.peakpeak.com>
Source record: 44031
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

>What voltage setting did you end up using? I spent $toomany on a
>"smart" charger but I have a couple older PS's about that I'd like to
>use like you do the Astron.
>TIA
>K3DWW

Recommendations vary among battery manufacturers and even for models made by the same manufacturer. Get their specifications and follow them.

Remember that float voltage is temperature dependent, and the specified voltage usually is at 25 degrees C. For other temperatures, compensate according to the manufacturer's spec (-3mV to -5mV per cell, per degree C). If you see a lot of temperture variation, consider getting a temperature-corrected charger. Your batteries will last longer!

--KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

3741. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-25 02:59:27 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CEEFE0F.B6891A73@eznec.com>
Source record: 44033
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

I've found that, for reasons that I don't understand, amateurs call all sealed lead-acid batteries "gel cells". All the sealed lead-acid batteries I've seen, with the exception of cylindrical Gates cells, have liquid electrolyte. Sealed lead-acid batteries with gelled electrolyte do exist, but they're relatively rare. So without other information, I'd assume that the Mendelsons "gel cells" have liquid electrolyte, not gelled.

Roy Lewallen, W7EL

JB wrote:
>
> 17AH gel cells will barely run an HT. High current drains are
> impractical because gassing within the cells insulates the plates
> faster than the gel can absorb and causes the internal resistance to
> rise out of hand. Current drains should be limited to 20% of AH
> rating (and with boat batteries too).
>
> Big as you can get (into your tray) Marine/Starting batteries are a
> pretty good compromise if you have to use it in your car.
>
> Jim, ac6tk

3742. 6 Meter Mitrek Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-25 05:02:42 UTC
From: Ian Fritzsche <NOSPAMabc@rose.net>
Message-ID: <01c203a9$662d5b00$0a0312ac@ian>
Source record: 44034
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Hello All,
I have a really nice 110w high-split low-band Motorola Mitrek that I would love to convert to six-meters. If anyone could point me in the right direction of how to retune the unit and for a source of 52.525 channel elements, I would greatly appreciate it. thanks!

Ian, KF4AON
(please reply via email if possible...thanx!)

--
Ian
mailto:NOSPAMabc@rose.net
-please remove NOSPAM from my email address when replying-

3743. Re: Simple to build Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-25 05:05:53 UTC
From: Steve Terry <g4wwknospam@tesco.net>
Message-ID: <acn659$ql8ci$1@ID-139484.news.dfncis.de>
Source record: 44035
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

"Doctor" <doctorwho20012001@yahoo.com> wrote in message
news:acj0d9$l2d$1@news.cowan.edu.au...
> Dose anybody know of a simple but powful morse code transmitter
> circuit one can build.
> I have heard where these circuits are interesting to build,
> and simple in construction.
> Thanks Craig
>
There's a simple one using a LM317 regulator chip,
puts out a few watts on top band
http://pmp3.net/harry/

Steve Terry

3744. external rx provision on hf transceivers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-25 05:44:41 UTC
From: Anthony Roskilly <Morse.Key@btinternet.com>
Message-ID: <acn8c9$op4$1@knossos.btinternet.com>
Source record: 44036

Hi,

was wondering if anyone had moded a transceiver
to allow use of an external rx, ie spur off the antenna
from the rx side of the transceiver. I presently own
an FT902 and FT102 and both these rigs have the
facility to use an external rx. Very few more modern
rigs provide this facility.

I note that the TS870 does
have ext rx socket, but reading the newsgroups I see
that the signal level on the main rig drops when using
the ext rx... does this mean that Kenwood just T off
the rx antenna input? - I would have thought some sort
of matching would be required to minimise signal loss.

I would like to move over to a more modern rig with
QSK and would like to hang on to the FT102 as a
2nd RX and back-up rig, so any info on providing a
ext rx o/p for say an IC735 would be gratefully received.

73 Tony G 3 Z R J see you on CW.

3745. Panel meter scales software..??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-25 11:24:52 UTC
From: Les Wolstenholme <avondale@zetnet.co.uk>
Message-ID: <3cef74e1$0$10783$4c56ba96@master.news.zetnet.net>
Source record: 44037

Did I see a post directing readers to a site
for panel meter scales software..?

Ta in advance,

Les

3746. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-25 11:34:40 UTC
From: gareth@lightfox.demon.co.uk
Message-ID: <20020525.113440.66@lightfox.demon.co.uk>
Source record: 44039
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

In article <uelqa8q3if5a2f@corp.supernews.com>,
xpyttl replied:

> > IIRC a razor blade was one of the principal components.

> Good heavens, you never made a "foxhole radio" when you were
> a Boy Scout?

Sorry, the "IIRC" bit was regarding what I remember from an 'obit' of
Tom Douglas, rather than how such a radio may be fashioned.

73, G.

--
http://www.rat.org.uk/

3747. Re: Panel meter scales software..??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-25 12:21:09 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <VkLH8.18995$ux5.20296@rwcrnsc51.ops.asp.att.net>
Source record: 44038

> Did I see a post directing readers to a site
> for panel meter scales software..?
>
> Ta in advance,

WB6BLD

http://www.qsl.net/wb6bld/software.html

W4ZCB

3748. Re: 6 Meter Mitrek Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-25 14:22:23 UTC
From: derek_toeppen@agilent.com
Message-ID: <2219e080.0205250622.218bafa7@posting.google.com>
Source record: 44040
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

"Ian Fritzsche" <NOSPAMabc@rose.net> wrote in message
news:<01c203a9$662d5b00$0a0312ac@ian>...

My favorite place to get channel elements is Channel Element
Headquarters
in Cincinnati, Ohio. 800-237-9654 They are a clearing house for
trading used channel elements. They test and warrenty every element
they ship.
The other choice is to send elements to a crystal manufacture and have
them re-cystalled. Someone like International Crystal Manufacturing
800-725-1426. This take longer and is more expensive.

With the disclaimer that I have only returned 2 meter and 440 Mitreks,
when I looked into it, it appeared you could simply follow the
Motorola
tuning procedure to re-tune it.

> Hello All,
> I have a really nice 110w high-split low-band Motorola Mitrek that I
> would love to convert to six-meters. If anyone could point me in the right
> direction of how to retune the unit and for a source of 52.525 channel
> elements, I would greatly appreciate it. thanks!
>
> Ian, KF4AON
> (please reply via email if possible...thanx!)

3749. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-25 14:47:11 UTC
From: Marc <marc_k@NoSpamreva.sixgirls.org>
Message-ID: <uev8vf1lrhtt37@corp.supernews.com>
Source record: 44041
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

In rec.radio.amateur.equipment laborkei <laborkeiNOSPAM@hotmail.com> wrote:
> If you didn't make Dayton..

> Mendelsons had 12V 17AH batteries for $10.00
> They have them on there website for $15.95.
> I had talked to them at Dayton and they said they had a lot of these
> batteries, and they are New.

Don't even bother!!
I WAS at Dayton, and those "new" batteries had not been charged for 4 YEARS(at least that was what I was told by a Mendelson employee).
So new, means NOS, but with SLA batteries, if you don't charge them once in a while, they lose much of their capacity.

> http://www.meci.com/

> Hamvention 2002 Pictures de WD5BJQ: http://www.qsl.net/wd5bjq/hamvent02.htm

> "Russell C. Nixon" <rcnixon@mindspring.com> wrote in message
> news:3cea451b.2496549@news.mindspring.com...
>> "Brian" <lea1bri@optusnet.com.au> wrote:
>>
>> >I don't know if anyone has seen the website I'm looking for (I hope they
>> >have), but I've lost the link so I cant give it to anyone either.
>> >Hoping someone can help me with the web address.
>> >
>> >The website is about a bloke in America (maybe Canada I can't remember).
> He
>> >is an amateur that lives in a zone where the power delivery isn't
> fantastic.
>> >To combat this he set up a car battery in a battery box with a volt meter
>> >and a cigarette lighter socket built in (as well as big posts for his
> radio
>> >equipment). Apparently this wasn't good enough so he linked up a solar
>> >system to it as well. There were a couple of other attachments also.
>> >
>> >Hoping someone can help me out with the address for it.
>> >
>> >Thanks in advance,
>> >
>> >Brian.
>> >Sydney Australia.
>>
>> Brian, you would be better off using a battery made for supplying a

>> relatively small amount of current for a longer time. A car battery
>> is optimized to supply a huge amount of current (100 to 200 amps) for
>> a short time in order to turn the starter motor. When the car is
>> running, its electrical needs are supplied by the alternator powered
>> by the engine. Gel cells are really what you want. They are sold for
>> computer room uninterruptable power supplies (UPS) and camper vehicle
>> use. Perhaps you can get them from a computer service company or just
>> buy a couple of new ones. The gel cell have a charging power
>> requirement similar to Nimh batteries and the charge control chips for
>> Nimhs work well for gel cells. Do a web search for "gel cells" and
>> you will get all you need! Also, do a web search for "Luke Enriquez".
>> He is an Australian ham and engineer who has a nice design for a gel
>> cell maintenance system.
>>
>> Russ
>> "Two-fifteen, no ambulance needed!"
>> Subtract all nines to reply

3750. Re: High performance Rx's

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-25 14:59:51 UTC
From: Ken Linney <Ken.Linney@btinternet.com>
Message-ID: <aco8t1fqn1@paris.btinternet.com>
Source record: 44042

Homebrewing at its best!! Congrats to all involved.

..... 73es Ken, G3UDA

John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:3CEEC3A8.22E5@pop.removethistomailme.net...
> Duncan Clark wrote:
> >
> > Hi Folks,
> >
> > For those of you looking to build a K2 or whatever for a high
> > performance rx take a look at the following just being described
in the
> > UK's Radcom:
> >
> > http://www.warc.org.uk/cdg2000%20files/release1/CDG2000.htm
>
> Wow, those prototypes are nice-looking. What type of display module
was
> used in "Dave's" rig?
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

3751. Re: Coil length and winding pitch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-25 15:12:32 UTC
From: Ken Linney <Ken.Linney@btinternet.com>
Message-ID: <aco9kvlgb1@knossos.btinternet.com>
Source record: 44043

Here is a useful relationship applicable to single-layer inductors:

n = 2.53(L/Sw)^1/3, where n = no of turns, L = inductance in uH &
Sw = winding pitch as described by Roy below.

If you have the chance see ARRL QEX Sep/Oct 2001 followed by Letters
to Editor, p61 in QEX, Jan/Feb 2001.

.... 73 Ken, G3UDA

Roy Lewallen <w7el@eznec.com> wrote in message
news:3CEC47AB.65B2FF56@eznec.com...
> Pitch is the center-to-center distance between adjacent turns, so
the
> length = pitch * number of turns. If you want to get fussy about the
> length, I suppose you should add one wire diameter, that is, length
=
> pitch * number of turns + wire diameter. This makes the assumption
that
> the coil ends just overlap. I think most (or all) writers ignore the
> wire diameter business, since beyond a few turns it becomes
> insignificant.
>
> The two turn coil in your example would then have a length of 2/16"
+
> the wire diameter, the 8 turn coil 1/2" + the wire diameter.
>
> Roy Lewallen, W7EL
>
> Tom Bruhns wrote:
> >
> > Please humor me with a straight answer to what seems a simple
> > question. If I wind a simple single layer RF coil, what is the
> > winding pitch in terms of the coil length and the number of turns?
> > Or, conversely, if I know the pitch and number of turns, what's
the
> > length? For instance, if I wind two turns on a 3/8"x16TPI bolt,
so
> > the pitch is 1/16", how long a coil does that two turns make? How
> > long a coil is 8 turns wound on the same bolt?
> >
> > Cheers,
> > Tom

3752. Re: High performance Rx's

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-25 16:41:23 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <T8PH8.29851$cQ3.1553@sccrnsc01>
Source record: 44044

> >
> > Wow, those prototypes are nice-looking. What type of display module
> was
> > used in "Dave's" rig?
> >
> > -- jm

It's a SED 1330 LCD .

W4ZCB

3753. Re: High performance Rx's

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-25 16:47:27 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <zePH8.29879$cQ3.1691@sccrnsc01>
Source record: 44045

"Harold E. Johnson" <W4ZCB@mchsi.com> wrote in message
news:T8PH8.29851$cQ3.1553@sccrnsc01...
>
>
> > >
> > > Wow, those prototypes are nice-looking. What type of display module
> > was
> > > used in "Dave's" rig?
> > >
> > > -- jm
>
> It's a SED 1330 LCD .

Sorry about that, the SED is the chip controller for the Densitron LM 6733
display.>
> W4ZCB
>
>

3754. Re: High performance Rx's

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-25 17:52:29 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <xbQH8.3960$UT.288892@bgtnsc05-news.ops.worldnet.att.net>
Source record: 44046

Real nice job!

Pete KE9OA

Harold E. Johnson <W4ZCB@mchsi.com> wrote in message
news:zePH8.29879$cQ3.1691@sccrnsc01...
>
> "Harold E. Johnson" <W4ZCB@mchsi.com> wrote in message
> news:T8PH8.29851$cQ3.1553@sccrnsc01...
> >
> >
> > > >
> > > Wow, those prototypes are nice-looking. What type of display module
> > > was
> > > used in "Dave's" rig?
> > > >
> > > -- jm
> >
> > It's a SED 1330 LCD .
>
> Sorry about that, the SED is the chip controller for the Densitron LM 6733
> display.>
> > W4ZCB
> >
> >
>
>

3755. Re: Simple to build Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-25 18:25:38 UTC
From: RVMJ <RVMJ@Safety-&-Arming.Clara.co.uk>
Message-ID: <qklveukgodt7q3e6hu8c0edauga44s98ve@4ax.com>
Source record: 43898
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

Mark Keith wrote:

>The problem is it's sort of hard to find tube parts
>these days. Used to, any junk tv had most of the parts to build a
>simple transmitter. "transformer, etc".

I'm sorry to disagree with you, but a visit to a rally such as
Dunstable Downs would have enabled you to come away with simply loads
of components for building the gear you mention. They're not new, not
shrink-wrapped, and not on glitzy display stands; but they're there!

--
from
RVMJ
Remove Safety-&-Arming before e-mailing

3756. Re: Coil length and winding pitch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-25 19:02:00 UTC
From: Ken Linney <Ken.Linney@btinternet.com>
Message-ID: <acon38$9l7$1@knossos.btinternet.com>
Source record: 43899

If my previous post ever arrives at this server!! then a correction to last please:

The Letters to Editor in QEX was from the Jan/Feb 2002 edition.

thanks to Harold, W4ZCB for correction.

.... Ken

Roy Lewallen <w7el@eznec.com> wrote in message news:3CEC47AB.65B2FF56@eznec.com...
> Pitch is the center-to-center distance between adjacent turns, so the
> length = pitch * number of turns. If you want to get fussy about the
> length, I suppose you should add one wire diameter, that is, length =
> pitch * number of turns + wire diameter. This makes the assumption that
> the coil ends just overlap. I think most (or all) writers ignore the
> wire diameter business, since beyond a few turns it becomes
> insignificant.
>
> The two turn coil in your example would then have a length of 2/16" +
> the wire diameter, the 8 turn coil 1/2" + the wire diameter.
>
> Roy Lewallen, W7EL
>
> Tom Bruhns wrote:
> >
> > Please humor me with a straight answer to what seems a simple
> > question. If I wind a simple single layer RF coil, what is the
> > winding pitch in terms of the coil length and the number of turns?
> > Or, conversely, if I know the pitch and number of turns, what's the
> > length? For instance, if I wind two turns on a 3/8"x16TPI bolt, so
> > the pitch is 1/16", how long a coil does that two turns make? How
> > long a coil is 8 turns wound on the same bolt?
> >
> > Cheers,
> > Tom

3757. Re: Simple to build Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-25 19:23:35 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <ngoveuov7o139o49a4ah3eugh0ulqs3ek0@4ax.com>
Source record: 43897
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

On Fri, 24 May 2002 20:13:53 -0400, ".Bill :-)" <TheRealExray@netscape.net> wrote:
>I'd stay away
>from the old-timey one-tube jobs unless you just like the sound of a
>chirpy signal...ie forget about the one-tube 813 MOPA designs.
>-Bill WX4A

One tube MOPA?

A Master Oscillator plus Power Amplifier transmitter would be at
least 2 tubes, unless you're using a dual section tube, which the
813 is not. A one tube transmitter would simply be a keyed power
oscillator.

Even MOPA designs often have some pulling (chirp). A better
minimalist design uses 3 stages, oscillator, buffer/driver, and
power amplifier. The buffer/driver isolates the oscillator from
the keyed amplifier stage, reducing pulling problems to near nil
(except for power supply sag, but that's a different issue).

Gary

3758. Re: Coil length and winding pitch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-25 20:01:59 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <acoqjn$h6j$1@paris.btinternet.com>
Source record: 43900

> Here is a useful relationship applicable to single-layer inductors:
>
> n = 2.53(L/Sw)^1/3, where n = no of turns, L = inductance in uH &
> Sw = winding pitch ==

Of what use is it ? Seems a load of nonsense to me.

Reg.

3759. Scope LCR 680 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-25 21:34:27 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <uf00r6chbsnh61@corp.supernews.com>
Source record: 43901

I just got this small digital handheld LCR meter and need some info. Google didn't help. Range is switched with 8 pushbuttons on the side. 200 pF to 200 microF, 20 ohm to 20 Mohm, 2mH to 200H. It has inputs for 3 leads G, Lo, and Hi. I wonder if anyone else has one that can tell me when to use the Hi and when to use the Lo?
tnx
hank wd5jfr

3760. Re: Coil length and winding pitch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-25 23:51:40 UTC
From: la8ak.xnd@online.no
Message-ID: <3cf007ec.88958685@news.online.no>
Source record: 43903

On Sat, 25 May 2002 20:01:59 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>> Here is a useful relationship applicable to single-layer inductors:
>>
>> n = 2.53(L/Sw)^1/3, where n = no of turns, L = inductance in uH &
>> Sw = winding pitch ==
>
>Of what use is it ? Seems a load of nonsense to me.
>---
>Reg.
>
>
can't see it is posted to uk.r.a - the flaming newsgroup

--
remove ,xnd to reply

3761. Re: Simple to build Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-25 23:51:40 UTC
From: la8ak.xnd@online.no
Message-ID: <3cf006dd.88687262@news.online.no>
Source record: 43904
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

On Sat, 25 May 2002 19:25:38 +0100, RVMJ
<RVMJ@Safety-&-Arming.Clara.co.uk> wrote:

>Mark Keith wrote:
>
>>The problem is it's sort of hard to find tube parts
>>these days. Used to, any junk tv had most of the parts to build a
>>simple transmitter. "transformer, etc".
>
>I'm sorry to disagree with you, but a visit to a rally such as
>Dunstable Downs would have enabled you to come away with simply loads
>of components for building the gear you mention. They're not new, not
>shrink-wrapped, and not on glitzy display stands; but they're there!
>
the UK VHF convention used to be good as well, a mate use to travel
from Bergen every year to buy components.

Wonder if the Upton Rally is still going, our Worcs. radio club used
to arrange it when I lived in SOA

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

3762. Re: Scope LCR 680 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-26 00:29:29 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CF02C69.ACB1F9F8@eznec.com>
Source record: 43905

My guess would be to connect the device under test between Hi and Lo.
Give it a try with components of known values.

Roy Lewallen, W7EL

Henry Kolesnik wrote:
>
> I just got this small digital handheld LCR meter and need some info. Google
> didn't help. Range is switched with 8 pushbuttons on the side. 200 pF to
> 200 microF, 20 ohm to 20 Mohm, 2mH to 200H. It has inputs for 3 leads G,
> Lo, and Hi. I wonder if anyone else has one that can tell me when to use
> the Hi and when to use the Lo?
> tnx
> hank wd5jfr

3763. FS Icom IC 202S

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-26 00:43:12 UTC
From: "Ronald J. Wicker" <ronwick@ev1.net>
Message-ID: <3cf012f7$1_2@newsa.ev1.net>
Source record: 43902
Cross-posted to: alt.ham-radio.vhf-uhf,rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

I have for sale an Icom IC-202S 2 meter SSB carry around. Nice little radio with batteries mike and instructions. These are pretty hard to come by any more. $145.00 plus shipping

3764. Site updated

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-26 07:00:23 UTC
From: UnTale <io@io.it>
Message-ID: <bK%H8.9651$ie.221274@twister2.libero.it>
Source record: 43906

Hi
I've updated my web site with new pages:

1) ACWS: Automatic CW Sender:
a simple circuit that, with a simple push,
transmit a memorized Cw message;

http://www.qsl.net/iz7ath/web/02_brew/19_acws/index.htm

2) How to regenerate Ferric Chloride
(used to make electronic printed board)

http://www.qsl.net/iz7ath/web/02_brew/14_howto/02_clor/index.htm

Thanks

73 de iz7ath, Talino Tribuzio

Homebrew, RF projects and digital tecniques on
http://www.qsl.net/iz7ath
IZ7ATH Talino +39 338 5029196

3765. Re: Coil length and winding pitch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-26 07:08:47 UTC
From: k7itm@aol.com
Message-ID: <3200347.0205252308.214c2d95@posting.google.com>
Source record: 43907

"Ken Linney" <Ken.Linney@btinternet.com> wrote in message
news:<aco9kvlgb1@knossos.btinternet.com>...
> Here is a useful relationship applicable to single-layer inductors:
>
> n = 2.53(L/Sw)^1/3, where n = no of turns, L = inductance in uH &
> Sw = winding pitch as described by Roy below.
>
>
> If you have the chance see ARRL QEX Sep/Oct 2001 followed by Letters
> to Editor, p61 in QEX, Jan/Feb 2001.
>
> .... 73 Ken, G3UDA

Let's see...that re-arranges to

L = Sw*(n/2.53)^3

The inductance depends only on winding pitch and number of turns, and
not on the diameter? Hmmmm. Any chance you transcribed that wrong?

Cheers,
Tom

(I have been hoping that others would check in with answers to my
original posting, by the way.)

3766. Re: Simple to build Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-26 08:49:48 UTC
From: Radio Ham <no.spam@no.spam>
Message-ID: <3cf0a941_2@mk-nntp-1.news.uk.worldonline.com>
Source record: 43908
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

But not guaranteed. My first HF TX was a KW Vanguard
which suffered from pulling despite being, ISTR, a
3 valve line-up.

Gary Coffman <ke4zv@bellsouth.net> wrote in message
news:ngoveuov7o139o49a4ah3eugh0ulqs3ek0@4ax.com...
> Even MOPA designs often have some pulling (chirp). A better
> minimalist design uses 3 stages, oscillator, buffer/driver, and
> power amplifier. The buffer/driver isolates the oscillator from
> the keyed amplifier stage, reducing pulling problems to near nil
> (except for power supply sag, but that's a different issue).

3767. Mounting Angle for Offset Dishes (6 and 3cm)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-26 10:07:47 UTC
From: la8ak.xnd@online.no
Message-ID: <3cf0b2a7.132672283@news.online.no>
Source record: 43909

Will use some offset for 10368MHz mounted upside down to avoid water
into the feedhorn. What is the offset angle from 90 degrees for
radiation to another amateur in Sweden?

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

3768. Re: Simple to build Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-26 10:41:19 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0205260241.2a6cf743@posting.google.com>
Source record: 43910
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

RVMJ <RVMJ@Safety-&-Arming.Clara.co.uk> wrote in message
news:<qklveukgodt7q3e6hu8c0edauga44s98ve@4ax.com>...
> Mark Keith wrote:
>
> >The problem is it's sort of hard to find tube parts
> >these days. Used to, any junk tv had most of the parts to build a
> >simple transmitter. "transformer, etc".
>
> I'm sorry to disagree with you, but a visit to a rally such as
> Dunstable Downs would have enabled you to come away with simply loads
> of components for building the gear you mention. They're not new, not
> shrink-wrapped, and not on glitzy display stands; but they're there!

Yep, you can find them, but I didn't know if he want to or had close
access to any hamfests. I guess most do at some point in the year.
Most flea markets and hamfests will usually have loads of junk parts
laying around for cheap. Many times people will drag the stuff out to
sell, and end up giving it away just so they don't have to haul it
back home. MK

3769. Re: Simple to build Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-26 10:52:53 UTC
From: RVMJ <RVMJ@Safety-&-Arming.Clara.co.uk>
Message-ID: <mff1fusg6g9eahtp6kv955aohu80egi14p@4ax.com>
Source record: 43911
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

Radio Ham (sic) wrote:

>Gary Coffman <ke4zv@bellsouth.net> wrote in message
>news:ngoveuov7o139o49a4ah3eugh0ulqs3ek0@4ax.com...
>> Even MOPA designs often have some pulling (chirp). A better
>> minimalist design uses 3 stages, oscillator, buffer/driver, and
>> power amplifier. The buffer/driver isolates the oscillator from
>> the keyed amplifier stage, reducing pulling problems to near nil
>> (except for power supply sag, but that's a different issue).

>But not guaranteed. My first HF TX was a KW Vanguard
>which suffered from pulling despite being, ISTR, a
>3 valve line-up.

If your read again the posting to which you replied, you will see
another reason for 'pulling' other than the number of valves in the
transmitter lineup. You power supply could have been poorly regulated.

Do you still pull?

--
from
RVMJ
Remove Safety-&-Arming before e-mailing

3770. Instructions for Levell TM12 - Please

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-26 11:43:43 UTC
From: Paul <paul.warman@usa.net>
Message-ID: <3cf0c9e8$1_1@mk-nntp-1.news.uk.worldonline.com>
Source record: 43912
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

Does anyone have a set of instructions for a Levell TM12 transistor tester?
I'll willingly reimburse expenses. Many thanks for reading. Paul, G0odp

3771. Re: Simple to build Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-26 11:45:38 UTC
From: Walt Davidson <walt99@tiscali.co.uk>
Message-ID: <jjf1fugt4k4uatdpghovvllob40cs0odkk@4ax.com>
Source record: 43913
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

On Sun, 26 May 2002 09:49:48 +0100, "Radio Ham" <no.spam@no.spam>
wrote:

>But not guaranteed. My first HF TX was a KW Vanguard

But I thought *real* radio hams built their own equipment.

>which suffered from pulling despite being, ISTR, a
>3 valve line-up.

It was a Geloso VFO into a single valve PA (a single 807, I think).
Yes, it did tend to be chirpy! A buffer stage between the Geloso unit
and the PA would have helped.

73 de G3NYY

--
Walt Davidson Email: g3nyy @freeuk.com

3772. Re: Scope LCR 680 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-26 11:56:49 UTC
From: "G. Skiffington" <skiffing@nbnet.nb.ca>
Message-ID: <3CF0F275.A7B@nbnet.nb.ca>
Source record: 43914

and my guess would be to try between the "G" terminal and either "LO" or "HI".....a possibility with the ranges being that the low terminal limits the amount of digits to the left of the decimal or changes to the lower value (i.e. 10 pf read instead of .01 nf etc) Guessing the "G" terminal to be common (Ground?).

Let us know what you find out.

Gord - VE1AJF

3773. Re: Simple to build Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-26 12:08:00 UTC
From: Radio Ham <no.spam@no.spam>
Message-ID: <3cf0cfde_3@mk-nntp-1.news.uk.worldonline.com>
Source record: 43915
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

Have I ever claimed to be a *real* radio ham?

Walt Davidson <walt99@tiscali.co.uk> wrote in message
news:jjf1fugt4k4uatdpghovvllob40cs0odkk@4ax.com...
> On Sun, 26 May 2002 09:49:48 +0100, "Radio Ham" <no.spam@no.spam>
> wrote:
>
> >But not guaranteed. My first HF TX was a KW Vanguard
>
> But I thought *real* radio hams built their own equipment.

3774. Re: Scope LCR 680 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-26 14:46:07 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <uf1t9iojkbh430@corp.supernews.com>
Source record: 43916

Finally had some time and here's what I found out playing with the thing.
It reads LCR with the Hi and Lo jacks, nothing with the G. With a few LCR
items that are in resonable tolerance it read them within reason. An
electolytic at 4.7 mike read 4.65 mikes, a .1 reads .12 and a .01 read .01.
Resistors are about 10%. Inductors are also close, 820 micro henries reads
800 and 3 in series reads 2.4 so it's on. On my scope I was able to see a
100 Hz sine wave in the L mode but couldn't lock on to the waveform in the C
mode. Still hoping someone has a manual who can guide me.
tnx
hank wd5jfr
"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:uf00r6chbsnh61@corp.supernews.com...
> I just got this small digital handheld LCR meter and need some info.
Google
> didn't help. Range is switched with 8 pushbuttons on the side. 200 pF to
> 200 microF, 20 ohm to 20 Mohm, 2mH to 200H. It has inputs for 3 leads G,
> Lo, and Hi. I wonder if anyone else has one that can tell me when to use
> the Hi and when to use the Lo?
> tnx
> hank wd5jfr
>
>

3775. Re: Coil length and winding pitch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-26 15:33:44 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <acqv8n$k8i$1@knossos.btinternet.com>
Source record: 43917

2.53 cubed is near enough to 16.
--
========================
Regards from Reg G4FGQ
Free Radio Modelling Software
Go to http://www.g4fgq.com
========================

3776. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-26 15:53:07 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3cf101ad.554289@news.peakpeak.com>
Source record: 43918

On Fri, 24 May 2002 19:59:27 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>I've found that, for reasons that I don't understand, amateurs call all
>sealed lead-acid batteries "gel cells". All the sealed lead-acid
>batteries I've seen, with the exception of cylindrical Gates cells, have
>liquid electrolyte. Sealed lead-acid batteries with gelled electrolyte
>do exist, but they're relatively rare. So without other information, I'd
>assume that the Mendelsons "gel cells" have liquid electrolyte, not
>gelled.
>
>Roy Lewallen, W7EL

"Gel Cell" is a trademark of Johnson Controls (and various successors
who aquired them). It refers to their construction, where the
electrolyte is modified to a viscous goo so that it wouls stay between
the plates. Other makers may have built this type under license or
sold them under their own brand name.

Most other Valve-Regulated Lead Acid (VRLA) use a fiberglass mat to
hold the liquid in place between the plates. The term "Absorbed Glass
Mat" (AGM) refers to this type, and it too might be a trademark.

The term "sealed battery" really doesn't apply to any of these. All
have a pressure-relief valve that opens to let out the gas when the
pressure gets too high, which happens if you charge at too high a
voltage or current. The valve is supposed to reclose to keep the
liquid inside. They're also called "non-spillable", which means
they're legal for transport on civilian aircraft (for electric powered
wheelchairs, etc.) and avoid some hazardous-material limitations for
ground transportation.

--KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

3777. Re: Simple to build Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-26 16:20:31 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3cf10a02.2687120@news.peakpeak.com>
Source record: 43919

On Sat, 25 May 2002 14:23:35 -0500, Gary Coffman <ke4zv@bellsouth.net>
wrote:

>
>Even MOPA designs often have some pulling (chirp). A better
>minimalist design uses 3 stages, oscillator, buffer/driver, and
>power amplifier. The buffer/driver isolates the oscillator from
>the keyed amplifier stage, reducing pulling problems to near nil
>(except for power supply sag, but that's a different issue).
>

Another problem is poor shielding between the oscillator and the PA.
Think of it as a capacitor switched in between the high-level stages
and the oscillator tuned circuits. Build your oscillator in a fully
shielded box, and filter every lead leaving that box (except the RF,
which should be shielded--i.e., coax). If can take a look at a
well-built older rig, such as a Johnson Ranger, this is just the
construction you will see. Or, build the oscillator in a completely
separate outboard box, with its own power supply, etc. (as in the
Heathkit external VFO).

--KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

3778. Re: Panel meter scales software..??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-26 16:47:22 UTC
From: Les Wolstenholme <avondale@zetnet.co.uk>
Message-ID: <3cf111fc$0$10780$4c56ba96@master.news.zetnet.net>
Source record: 43920

"Harold E. Johnson" <W4ZCB@mchsi.com> wrote in message
news:VkLH8.18995$ux5.20296@rwcrnsc51.ops.asp.att.net...
>
>
> > Did I see a post directing readers to a site
> > for panel meter scales software..?
> >
> > Ta in advance,
>
> WB6BLD
>
> http://www.qsl.net/wb6bld/software.html
>
> W4ZCB

I'm in your debt, thank you very much.

Les - G0RDF - Chesterfield UK

3779. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-26 16:54:23 UTC
From: JB <ac6tk@nospamcybertime.net>
Message-ID: <acr3ur$939$1@madmax.keyway.net>
Source record: 43921
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

You really have to know what you have before you can know
how to maintain them, or if they are compatible with your usage.

REAL gel cells are plentiful and available in a variety of AH
ratings. And most do not leak at all, even if turned upside
down.

Maintenance Free car batteries often use a calcium
additive that reduces the electrolyte loss and allows a greater
margin for overcharge. This doesn't hurt the ability to supply
adequate starting power, but makes for poor deep-cycle
performance, and recovery after a deep cycle. They also tend
to leak at the post, making them no better than a REAL deep-
cycle Marine or Golf cart battery that allows you to add water
as needed. BTW I have seen Golf cart batteries on sale at
CostCo for a great price.

All I was stating, was that if you were for some reason forced
to use a car battery, you would be better off with a Marine/starting
or RV battery, than with a stock type car battery.

However, I don't see why anyone would want to use a stock type
car battery unless they had a bunch of junk cars in the yard, and
a low current drain accessory to run, like an old CB or 8-track
stereo, because stock type low-maintenance or maintenance-free
car batteries don't keep well in this kind of operation.

Jim,ac6tk

"Roy Lewallen" <w7el@eznec.com> wrote in message news:3CEEFE0F.B6891A73@eznec.com...
: I've found that, for reasons that I don't understand, amateurs call all
: sealed lead-acid batteries "gel cells". All the sealed lead-acid
: batteries I've seen, with the exception of cylindrical Gates cells, have
: liquid electrolyte. Sealed lead-acid batteries with gelled electrolyte
: do exist, but they're relatively rare. So without other information, I'd
: assume that the Mendelsons "gel cells" have liquid electrolyte, not
: gelled.
:
: Roy Lewallen, W7EL
:
: JB wrote:
: >
: > 17AH gel cells will barely run an HT. High current drains are
: > impractical because gassing within the cells insulates the plates

: > faster than the gel can absorb and causes the internal resistance to
: > rise out of hand. Current drains should be limited to 20% of AH
: > rating (and with boat batteries too).
: >
: > Big as you can get (into your tray) Marine/Starting batteries are a
: > pretty good compromise if you have to use it in your car.
: >
: > Jim, ac6tk

3780. Re: Simple to build Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-26 18:17:08 UTC
From: la8ak.xnd@online.no
Message-ID: <3cf10f45.156385481@news.online.no>
Source record: 43922
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

On Sun, 26 May 2002 12:45:38 +0100, Walt Davidson
<walt99@tiscali.co.uk> wrote:

>On Sun, 26 May 2002 09:49:48 +0100, "Radio Ham" <no.spam@no.spam>
>wrote:
>
>>But not guaranteed. My first HF TX was a KW Vanguard
>
>But I thought *real* radio hams built their own equipment.
>
>>which suffered from pulling despite being, ISTR, a
>>3 valve line-up.
>
>It was a Geloso VFO into a single valve PA (a single 807, I think).
>Yes, it did tend to be chirpy! A buffer stage between the Geloso unit
>and the PA would have helped.
>
>73 de G3NYY
>
Geloso had a bad reputation in 1962 when demands weren't so high, so
don't expect it to work properly today

73,
LA8AK
--
remove ,xnd to reply

3781. power rotator from car battery?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-26 19:04:58 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3cf1311d.10258032@news.freeserve.net>
Source record: 43923

I'm thinking of fitting a caravan out as an HF/VHF mobile shack and would like your experience of running CD45 or similar rotators on 12v DC in this situation.
thanks Mike W

3782. Re: Scope LCR 680 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-26 21:48:10 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <uKcl8.6102$UT.429961@bgtnsc05-news.ops.worldnet.att.net>
Source record: 43924

Hi Henry,
It sounds as if you've got things hooked up the right way.
Many LCR meters have what you call a 4-wire guarded probe; it sounds like your unit has a variation of this scheme, except that only two wires are used. Ott's book on low noise techniques describes the grounding scheme; at low frequencies, it is desired to have only one end of the ground shield connected. This avoids ground loops. The reason that you have two "hot" wires, is because your input cable is probably feeding an op-amp, in differential mode. Most likely, this op-amp is an instrumentation amplifier. A 4-wire probe setup would use the 3 op-amp instrumentation amplifier configuration, with two op-amps in the front end summing to a third op-amp. This acheives a very high input impedance.
I hope this answers your questionn!

Pete KE9OA

Henry Kolesnik <wd5jfr@oklahoma.net> wrote in message
news:uf1t9iojkbh430@corp.supernews.com...
> Finally had some time and here's what I found out playing with the thing.
> It reads LCR with the Hi and Lo jacks, nothing with the G. With a few LCR
> items that are in resonable tolerance it read them within reason. An
> electolytic at 4.7 mike read 4.65 mikes, a .1 reads .12 and a .01 read
.01.
> Resistors are about 10%. Inductors are also close, 820 micro henries
reads
> 800 and 3 in series reads 2.4 so it's on. On my scope I was able to see a
> 100 Hz sine wave in the L mode but couldn't lock on to the waveform in the
C
> mode. Still hoping someone has a manual who can guide me.
> tnx
> hank wd5jfr
> "Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
> news:uf00r6chbsnh61@corp.supernews.com...
> > I just got this small digital handheld LCR meter and need some info.
> Google
> > didn't help. Range is switched with 8 pushbuttons on the side. 200 pF
to
> > 200 microF, 20 ohm to 20 Mohm, 2mH to 200H. It has inputs for 3 leads
G,
> > Lo, and Hi. I wonder if anyone else has one that can tell me when to
use
> > the Hi and when to use the Lo?
> > tnx
> > hank wd5jfr
> >

> >
>
>

3783. Walford kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-26 22:32:23 UTC
From: SB <susantv69_uk@btinternet.com>
Message-ID: <acrnpn$9sb$1@paris.btinternet.com>
Source record: 43925

Has anyone had experience of building and operating a built Walford kit, in particular the Bristol SSB/CW tcvr. I am considering buying this kit in the future.

3784. Re: N6WWW Home Page

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-27 00:04:41 UTC
From: Kevin Gunther <beeltee@optonline.net>
Message-ID: <tKeI8.162422$ja.45011192@news02.optonline.net>
Source record: 43926
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur,rec.radio.amateur.homebrew

"N6WWW" <neonmoonx@hotmail.com> wrote in message
news:07VG8.81598$UV4.134327@rwcrnsc54...
> Oops!
>
> It's http://n6www.cjb.net/
>
> Let me know what you think of it. It was a hoot to setup.
>
> Jason - N6WWW
>

Jason:

In reality, the letter "W" has three syllables.

Kevin
W1FWB

3785. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-27 02:56:57 UTC
From: mcalhoun@ksu.edu
Message-ID: <acs79p$bdk@unix1.cc.ksu.edu>
Source record: 43927
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

>Maintenance Free car batteries often use a calcium additive that reduces
>the electrolyte loss and allows a greater margin for overcharge. This
>....[snip]....
>However, I don't see why anyone would want to use a stock type
>car battery unless they had a bunch of junk cars in the yard, and
>a low current drain accessory to run, like an old CB or 8-track
>stereo, because stock type low-maintenance or maintenance-free
>car batteries don't keep well in this kind of operation.

That doesn't match my experience.

I've powered an 100-watt HF transceiver, a 25-watt VHF transceiver, and
an AM/FM receiver (for easy listening), plus occasionally even the lights
(when the mains are off) in my shack for over 25 years using stock lead-
acid batteries from my local discount store. They last about as long
(3-5 years) in my "shack" as they do in my automobiles.

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

3786. Re: Simple to build Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-27 05:02:43 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0205262102.1aeb2ae@posting.google.com>
Source record: 43928

tmgroat"at"peakpeak"dot"com (Tim Groat) wrote in message
news:<3cf10a02.2687120@news.peakpeak.com>...
> On Sat, 25 May 2002 14:23:35 -0500, Gary Coffman <ke4zv@bellsouth.net>
> wrote:
>
> >
> > >Even MOPA designs often have some pulling (chirp). A better
> > >minimalist design uses 3 stages, oscillator, buffer/driver, and
> > >power amplifier. The buffer/driver isolates the oscillator from
> > >the keyed amplifier stage, reducing pulling problems to near nil
> > >(except for power supply sag, but that's a different issue).
> > >
>
> Another problem is poor shielding between the oscillator and the PA.
> Think of it as a capacitor switched in between the high-level stages
> and the oscillator tuned circuits. Build your oscillator in a fully
> shielded box, and filter every lead leaving that box (except the RF,
> which should be shielded--i.e., coax). If can take a look at a
> well-built older rig, such as a Johnson Ranger, this is just the
> construction you will see. Or, build the oscillator in a completely
> separate outboard box, with its own power supply, etc. (as in the
> Heathkit external VFO).
>
> --KR0U

Even the old rangers and valiants had a distinctive sound due to their
differential shift?? keying. I think thats what they called it
anyway..Been awhile since I messed with those. They were good rigs for
their times though.
I used a friends ranger a lot when I first started out, and bought a
valiant later on as a "big" novice transmitter. My first homebrew
transmitters with the single 6v6's had a slight pull, but not too bad.
You could reduce it quite a bit dependng on the tuning. So I always
listened to my own signal when tuning.
MK

3787. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-27 06:33:59 UTC
From: Steve Terry <g4wwknospam@tesco.net>
Message-ID: <acsk2g$s6nap$1@ID-139484.news.dfncis.de>
Source record: 43929
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

"Tinker" <hamguy@yahoo.com> wrote in message
news:mvuseuot9p4u6k9htja26na7vfnkd6hd08@4ax.com...
> On Fri, 24 May 2002 13:59:44 +0100, "Radio Ham" <no.spam@no.spam>
> wrote:
>
> >OK! Time to discuss the USA atrocities during their
> >invasion of Vietnam, rapes, massacres, etc.
>
> OR
>
> We could discuss atrocities by the British in Northern Ireland,
> perhaps ?
>
Indeed, British troops shouldn't of gone into N Ireland in 1969
They only saved Catholics from Protestant attacks

"Bloody Romans, what have they ever does for us?"
(Life of Brian)

Steve Terry

3788. Re: Rough Science build a tx and rx: UK BBC2 21 May 7.30

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-27 07:19:49 UTC
From: Radio Ham <no.spam@no.spam>
Message-ID: <3cf1de25$1_3@mk-nntp-1.news.uk.worldonline.com>
Source record: 43930
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

I always discuss British atrocities in NI.
Also those in the Malvinas squabble, where
evidence of Brit war crimes was not brought to
trial, not because of any lack of evidence, but
because of a pompous outcry; pomposity and indignance
that Brits could be anything like Nazis, even thought they are.
Still, after 50 years of parasitism, jumping to the
front of the queue in taxpayer-funded hospitals and
yet paying no tax, we now know that heads-of-state
are not immune to prosecution, Clinton, Milosevic; and
so it can be only a matter of time before Lilibet Windsor
is brought before the International Court for all the
atrocities for which she has been responsible.

Brit and the USA are an equally evil and hypocritical
alliance when it comes to murdering their fellow man
on the most trivial and preposterous of reasons.

Steve Terry <g4wwknospam@tesco.net> wrote in message
news:acsk2g$s6nap$1@ID-139484.news.dfncis.de...
> "Tinker" <hamguy@yahoo.com> wrote in message
> news:mvuseuot9p4u6k9htja26na7vfnkd6hd08@4ax.com...
> > On Fri, 24 May 2002 13:59:44 +0100, "Radio Ham" <no.spam@no.spam>
> > wrote:
> > >OK! Time to discuss the USA atrocities during their
> > >invasion of Vietnam, rapes, massacres, etc.
> > OR
> > We could discuss atrocities by the British in Northern Ireland,
> > perhaps ?
> Indeed, British troops shouldn't of gone into N Ireland in 1969
> They only saved Catholics from Protestant attacks

3789. Re: Panel meter scales software..??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-27 08:53:02 UTC
From: Mike Allenson <mike@allenson.fsnet.co.uk>
Message-ID: <acss86$74q$1@newsg1.svr.pol.co.uk>
Source record: 43931

Les here is another set of programmes that came up here a few weeks ago - a linear/log scale version and an arbitrary non linear version where you specify scale points vs degrees rotation and calibration text labels of your choice.
www.wmeadow.demon.co.uk/scales/scales.htm

Mike G3TGD

"Les Wolstenholme" <avondale@zetnet.co.uk> wrote in message
news:3cf111fc$0$10780$4c56ba96@master.news.zetnet.net...
>
> "Harold E. Johnson" <W4ZCB@mchsi.com> wrote in message
> news:VkLH8.18995$ux5.20296@rwcrnsc51.ops.asp.att.net...
> >
> >
> > > Did I see a post directing readers to a site
> > > for panel meter scales software..?
> > >
> > > Ta in advance,
> >
> > WB6BLD
> >
> > http://www.qsl.net/wb6bld/software.html
> >
> > W4ZCB
>
>
> I'm in your debt, thank you very much.
>
> Les - G0RDF - Chesterfield UK
>
>

3790. Re: Walford kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-27 11:52:21 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3cf21cfa.1167372@news.freeserve.net>
Source record: 43932

On Sun, 26 May 2002 22:32:23 +0000 (UTC), "SB"
<susantv69_uk@btinternet.com> wrote:

>Has anyone had experience of building and operating a built Walford kit, in
>particular the Bristol SSB/CW tcvr. I am considering buying this kit in the
>future.
>
>
I have no direct experience of them, but from what I saw of the range
of kits, the build quality and the vendor when I attended the Yeovil
QRP convention (UK) a few weeks ago I have full confidence in the
product and the necessary backup.
hth Mike W G8NXD qthr

3791. Re: power rotator from car battery?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-27 12:35:25 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <uf4a15dum0kob2@corp.supernews.com>
Source record: 43933

The motors in these rotors require 120 VAC as does the power transformer for the meter indicator located in the control box. Your best bet is to use a 12 VDC to 120 VAC inverter to power the rotor.

3792. Unelco

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-27 15:52:20 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <0PeuimC0Yl88Ew+Z@fslife.co.uk>
Source record: 43934

Does anyone know if this company has a website?

Google and MSN turned up zilch.

Many thanks
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3793. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-27 15:55:57 UTC
From: post_to_usenet@hotmail.com
Message-ID: <b6b4e772.0205270755.64598c6a@posting.google.com>
Source record: 43935
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

"JB" <ac6tk@nospamcybertime.net> wrote in message news:<acr3ur$939$1@madmax.keyway.net>...

<snip>
> However, I don't see why anyone would want to use a stock type
> car battery unless they had a bunch of junk cars in the yard, and
> a low current drain accessory to run, like an old CB or 8-track
> stereo, because stock type low-maintenance or maintenance-free
> car batteries don't keep well in this kind of operation.
>
> Jim,ac6tk

Hi,

Maybe because they are very cheap? Here a new 12V 45 AH 'car' battery costs about 24 euros (~22 US$). A 12 V 7AH gel 'alarm' battery costs approx the same. A 12V 35AH gel type is >120 euros (>110 US$). Surely the gel type will be much more adapted to deep cycle conditions, but the price difference more than compensates for it. Of course, car batteries are much heavier, bulky and inconvenient to work with, but, if you have the place to put them, I think they are better.

I do not know the prices of marine / golf / etc batteries, but given the equation "price = K / popularity" (where K tends to large numbers) I think they must also be quite expensive.

Toni

3794. Cushcraft R7 / R7000 Antennas INFO Page w/downloads

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-27 16:15:13 UTC
From: johnsmithinmissouri@netzero.net
Message-ID: <4debd24a.0205270815.68ae7211@posting.google.com>
Source record: 43936

Here is a very informative and nicely done Cushcraft R7 / R7000 tech page I found with illustrations, tech tips, R7 trap drawings, R7 and R7000 instruction and assembly manuals too.

It is all free and also all - downloadable - and by far the best page of it's kind I have ever found...

http://www.ab7sl.com/index.html?row1col2=r7.html

John Smith - KB9BMB

3795. Re: power rotator from car battery?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-27 16:36:20 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3cf25f99.3899865@news.peakpeak.com>
Source record: 43937

On Mon, 27 May 2002 08:35:25 -0400, "Bob Lewis \(AA4PB\)"
<rlewis@staffnet.com> wrote:

>The motors in these rotors require 120 VAC as does the power
>transformer for the meter indicator located in the control box. Your
>best bet is to use a 12 VDC to 120 VAC inverter to power the rotor.
>
>

Look for a sine-wave output inverter. The rotator uses a split-phase
motor with a phase shifting capacitor. These don't work very well with
square-wave AC from cheaper inverters, because the phase shifting
capacitor exaggerates the harmonics of the non-sine wave voltage.

--KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

3796. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-27 18:41:33 UTC
From: Sylvan Butler <Znospam+noZs_0205@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnaf4vh3.itt.Znospam+noZs_0205@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 43851
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

On Fri, 24 May 2002 19:59:27 -0700, Roy Lewallen <w7el@eznec.com> wrote:
> I've found that, for reasons that I don't understand, amateurs call all
> sealed lead-acid batteries "gel cells". All the sealed lead-acid

True.

> batteries I've seen, with the exception of cylindrical Gates cells, have
> liquid electrolyte. Sealed lead-acid batteries with gelled electrolyte
> do exist, but they're relatively rare. So without other information, I'd

Not at all rare.

The typical "maintenance free" lead acid is not sealed and will
spill in some positions, and they do vent under hard charging.

The true sealed lead-acid can be operated in any position (will not
leak) and does not vent unless severely abused (venting is a last
chance method to avoid a case rupture, similar to nicd/nimh).

I have only seen two technology types of sealed lead-acids. The
gelled electrolyte type is by far the most common. The other is the
starved electrolyte, typified by the Absorbed Glass Mat (AGM)
batteries like the Optima yellow or red top or the exide "6 pack".

The gelled cells are a fraction of the price of AGM cells. They are
found in alarm equipment, "portable jump start" power packs,
children's rechargable riding toys, emergency lighting, rechargable
lawn and garden equipment, consumer computer UPS systems, etc. In
other words, nearly everyplace which needs higher capacity than a
small nicd pack, and where the weight of lead-acid is tolerable.

The typical yeasu 12v/7ah/$20 "brick" is a gelled electrolyte, and
probably the single most common sealed lead acid battery in the US.

> assume that the Mendelsons "gel cells" have liquid electrolyte, not
> gelled.

I wouldn't. But $16 is a very good price for new 12v/17ah gelled...

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. ##### change ^ to @ ##### |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Fight terrorism, arm the population!

3797. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-27 18:49:08 UTC
From: Sylvan Butler <Znospam+noZs_0205@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnaf4vva.itt.Znospam+noZs_0205@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 43855
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

On Sat, 25 May 2002 14:47:11 -0000, Marc <marc_k@NoSpamreva.sixgirls.org> wrote:
> In rec.radio.amateur.equipment laborkei <laborkeiNOSPAM@hotmail.com> wrote:
>> Mendelsons had 12V 17AH batteries for $10.00
>> They have them on there website for $15.95.
>> http://www.meci.com/
>> I had talked to them at Dayton and they said they had a lot of these
>> batteries, and they are New.
>
> Don't even bother!!
> I WAS at Dayton, and those "new" batteries had not been charged for 4 YEARS(at least
> that was what I was told by a Mendelson employee).

Ah. That explains the low price. :(

> So new, means NOS, but with SLA batteries, if you don't charge them once in a while,
> they lose much of their capacity.

If sitting for four years, I'd expect them to be almost but not
quite useless because of extreme sulfation. A couple more years of
sitting and that would be the end of them. A year or two ago I
purchased a UPS "new in box" which had been sitting since 1994. It
contained four, 6v/4ah gell cells. Of those four batts, three of
them would not charge above a fraction of a volt. the fourth
charges to about 2.1v, with nearly 0Ah capacity.

I sure hope the Mendelson batts are better...

Of course you may be able to recover the sulfated batts, but I'm
skeptical. http://www.shaka.com/~kalepa/desulf.htm

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. ##### change ^ to @ ##### |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Fight terrorism, arm the population!

3798. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-27 19:53:44 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <29wl8.1373$2O2.149786@newsfep1-win.server.ntli.net>
Source record: 43938
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

"Toni" <post_to_usenet@hotmail.com> wrote in message
news:b6b4e772.0205270755.64598c6a@posting.google.com...
> "JB" <ac6tk@nospamcybertime.net> wrote in message
news:<acr3ur$939$1@madmax.keyway.net>...
>
> <snip>
> > However, I don't see why anyone would want to use a stock type
> > car battery unless they had a bunch of junk cars in the yard, and
> > a low current drain accessory to run, like an old CB or 8-track
> > stereo, because stock type low-maintenance or maintenance-free
> > car batteries don't keep well in this kind of operation.
> >
> > Jim,ac6tk
>
> Hi,
>
> Maybe because they are very cheap? Here a new 12V 45 AH 'car' battery
> costs about 24 euros (~22 US$). A 12 V 7AH gel 'alarm' battery costs
> approx the same. A 12V 35AH gel type is >120 euros (>110 US$). Surely
> the gel type will be much more adapted to deep cycle conditions, but
> the price difference more than compensates for it. Of course, car
> batteries are much heavier, bulky and inconvenient to work with, but,
> if you have the place to put them, I think they are better.
>
> I do not know the prices of marine / golf / etc batteries, but given
> the equation "price = K / popularity" (where K tends to large numbers)
> I think they must also be quite expensive.
>
> Toni

3799. Re: N6WWW Home Page

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-27 20:33:02 UTC
From: N6WWW <neonmoonx@hotmail.com>
Message-ID: <2KwI8.44060$352.2158@sccrnsc02>
Source record: 43939
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur,rec.radio.amateur.homebrew

Good point! Correction noted!

--
****
N6WWW's Ham Pages - NEW!
Fantastic Message Boards on VHF/UHF,
QRP, Homebew, Trading, and more!
http://n6www.cjb.net/
****
"Kevin Gunther" <beeltee@optonline.net> wrote in message
news:tKeI8.162422$ja.45011192@news02.optonline.net...
>
> "N6WWW" <neonmoonx@hotmail.com> wrote in message
> news:07VG8.81598$UV4.134327@rwcrnsc54...
> > Oops!
> >
> > It's http://n6www.cjb.net/
> >
> > Let me know what you think of it. It was a hoot to setup.
> >
> > Jason - N6WWW
> >
>
> Jason:
>
> In reality, the letter "W" has three syllables.
>
> Kevin
> W1FWB
>
>

3800. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-27 20:43:36 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <6Vwl8.1482$2O2.179989@newsfep1-win.server.ntli.net>
Source record: 43943
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

> Maybe because they are very cheap? Here a new 12V 45 AH 'car' battery
> costs about 24 euros (~22 US$). A 12 V 7AH gel 'alarm' battery costs
> approx the same. A 12V 35AH gel type is >120 euros (>110 US$). Surely
> the gel type will be much more adapted to deep cycle conditions, but
> the price difference more than compensates for it. Of course, car
> batteries are much heavier, bulky and inconvenient to work with, but,
> if you have the place to put them, I think they are better.
>
> I do not know the prices of marine / golf / etc batteries, but given
> the equation "price = K / popularity" (where K tends to large numbers)
> I think they must also be quite expensive.
=========
1) As Roy Llewallen commented in an earlier posting ,a Sealed Lead Acid (SLA) battery is not necessarily a Gel- type.

2) An SLA 12v-18Ah costs approx US$ 25.- (in the USA)
In the UK ,Mainline Surplus -Leicester sell SLA 12V- 18Ah ,make Kiel (New Old Stock) for GBP 12.50 incl VAT= Value Added Tax) equiv to approx US $ 19.-
I have quite a number of these in the shack and am quite happy with them.

For golfers in the UK : This battery is very suitable for an electric golf trolly. I recently replaced a Yuasa model: NPC15-12 , 12V-15Ah SLA which had been rather active for the past 3 years ,by the above make Kiel battery having identical dimensions . The old Yuasu battery has been retired to the shack where it still performs well be it on loads somewhat lower than a golf trolly motor .

3) The 'cheap' car batteries referred to in the above posting might not be the sealed type .In that case it would not be advisable to have them located in the shack , for safety reasons ....because of hydrogen/oxygen venting. Venting batteries with removable caps for water top-up must be located in a well ventilated area !!

Frank gm0csz.kn6wh@ntlworld.com

3801. Re: High performance Rx's

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-27 20:47:00 UTC
From: "Sverre Holm (LA3ZA)" <la3za@qsl.net>
Message-ID: <8Xwl8.6185$_15.168341@news4.ulv.nextra.no>
Source record: 43940

Very interesting that they use the I2C bus to control everything in the
transceiver, gives access to a lot of nice circuitry for almost free.

Sverre
LA3ZA
www.qsl.net/la3za

"Duncan Clark" <NEWS@[127.0.0.1]> wrote in message
news:yKP+UEDSFp78Ewmo@ntlworld.com...
>
> Hi Folks,
>
> For those of you looking to build a K2 or whatever for a high
> performance rx take a look at the following just being described in the
> UK's Radcom:
>
> http://www.warc.org.uk/cdg2000%20files/release1/CDG2000.htm
>
> i.e.
>
> "We do not claim that this is the last word in analogue circuitry. That,
> most definitely, it is not; in spite of those who say that analogue
> circuitry is dead. It is however designed to offer the best performance
> we could achieve with a design that is reproducible, and on a practical
> note, its modularity lends itself to replacement of modules with others
> as time progresses. Unlike many commercial transceivers, it does not
> offer unlimited bells and whistles, many of which, on inspection, appear
> to be no more than sales gimmicks, but we have included those features
> that we consider to enhance operation. What it does do is to beat the
> pants off most of them in regard to performance. Receive IP3 (third
> order intercept) is about +40dBm. Noise figure is around 10dB. On SSB,
> 10dB(S+N)/N is about 0.22uV (-120dBm). Its oscillator phase noise levels
> and close in performance achieve -140 dBc/Hz at 9KHz offset from carrier
> and -150 dBc/Hz at just over 20 kHz on the 20 metre band"
>
> "On SSB this gives a noise floor of (-174+10*log(2200)+10)dBm, or
> -130dBm [3]. With an IP3 of +40dBm and a noise floor of -130 dBm,
> this gives an IP3 dynamic range of 113dB using the formula: IP3 DR =
> 2/3*(IP3-MDS)."
>
> Duncan
> G4ELJ
> --
> Support bacteria. They are the only culture some people have.
>

> Duncan Clark
>

3802. Re: TOKO Coils

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-27 20:56:26 UTC
From: John Fletcher <johnfletch@2e1gmv.freeserve.co.uk>
Message-ID: <acu6i4gmb1@news5.svr.pol.co.uk>
Source record: 43941

Great site!!! thanks for giving it out1 Cheers, john
"Lasse SM5GLC" <no.spam.lasse.moell@no.spam.swipnet.se> wrote in message
news:3ce11487.19870405@news.lin.foa.se...
> I

3803. FS: 1000's of TUBES from $.35 each

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-27 21:52:17 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <lUxl8.84405$Q93.4780414@news1.west.cox.net>
Source record: 43942

Please email w6krc@arrl.net for a detailed list.

3804. Re: Cushcraft R7 / R7000 Antennas INFO Page w/downloads

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-27 23:19:38 UTC
From: Matt Patterson <mattpatt@1starnet.com>
Message-ID: <eazl8.47228$Gs.4223742@bin5.nnrp.aus1.giganews.com>
Source record: 43944

Good grief.. Here we go again! Here is a copy of the last post like this..
Notice any similarities! I think someone is neads their head examined..
You know who you are..

"Here is a very well-done Cushcraft R7 / R7000 tech page I found
with illustrations, tech tips, R7 trap drawings, R7 and R7000
instruction and assembly manuals too.

It is all free and also all downloadable. By far the very best page of
it's
kind I have ever found...

http://www.ab7sl.com/index.html?row1col2=r7.html

Joe Martin - WA5LHV"

"John Smith" <johnsmithinmissouri@netzero.net> wrote in message
news:4debd24a.0205270815.68ae7211@posting.google.com...
> Here is a very informative and nicely done Cushcraft R7 / R7000 tech
> page I found with illustrations, tech tips, R7 trap drawings, R7 and
> R7000 instruction and assembly manuals too.
>
> It is all free and also all - downloadable - and by far the best page
> of it's kind I have ever found...
>
> http://www.ab7sl.com/index.html?row1col2=r7.html
>
> John Smith - KB9BMB
>

3805. Two into Motorcycle Headset

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-27 23:32:30 UTC
From: diemuse@hiwaay.net
Message-ID: <d032b7b8.0205271532.1442a0ac@posting.google.com>
Source record: 43945

Ok here's my question.

I would like to run my handheld radio and radar detector into the same helmet headset at the same time. Both devices work fine with the headset by themselves, but I would like to be able to use them both at once. Will the signal coming out the radar detector hurt the radio or vise versa.

I plan to just spice into the headset, no special devices.

Regards,

John

3806. Re: Coil length and winding pitch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-27 23:44:56 UTC
From: Phil Rice <someone@somewhere.oz>
Message-ID: <280520020944563162%someone@somewhere.oz>
Source record: 43946

Just thought I'd buy into this one, without having read too many of the preceding posts.

"Wheeler's" inductance formula gives the inductance in microhenries to an accuracy of (if my failing memory serves me correctly) better than +/- 2% providing the length "l" is greater than the radius "R".

See any ancient copy of the "Radiotron Designers Handbook".

```
R*R * N*N
L= ----------- uH
9R + 10l
```

"R" is the radius in inches, "l" the length in inches
and if you don't know what "N" is, you shouldn't be winding coils!

There are better formulae, but this one is close enough for Government Work, and it's easy to remember.

Happy tinkering,
73 de Phil VK3BHR

3807. Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 01:44:45 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3CF2E10D.B24F4F0C@visi.com>
Source record: 43847

Hey gang,
I have a half full bottle of General Cement Q Dope which has turned to the consistancy of Jello. What can I use as a thinner to make it usable again?

Thanks

Bob WB0POQ

3808. Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 01:55:54 UTC
From: Marty <marty1225@earthlink.net>
Message-ID: <KsBI8.1940$K64.809@newsread2.prod.itd.earthlink.net>
Source record: 43848

Looking for a basic surge arrester circuit.

I have a unit with three MOV's in place, but there are no caps or neon bulb
I vaguely recall that two caps are used, one
between each prong contact and the ground, and the neon goes between the
prongs contacts. Is this correct?

I have the 120VAC caps.

Comments, or a schematic or a reference to one, would be appreciated.

3809. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 02:09:53 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <acuothjqp1@knossos.btinternet.com>
Source record: 43849

Try benzene in a well ventillated room.

--
==========
Regards from Reg G4FGQ
Free Radio Modelling Software
Go to http://www.g4fgq.com
==========
"Bob Liesenfeld" <wb0poq@visi.com> wrote in message
news:3CF2E10D.B24F4F0C@visi.com...
> Hey gang,
> I have a half full bottle of General Cement Q Dope which has turned
> to the consistancy of Jello. What can I use as a thinner to make it
> usable again?
>
> Thanks
>
> Bob WB0POQ

3810. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 02:56:50 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3CF2F07D.F8F0E5C1@gte.net>
Source record: 43850

Bob Liesenfeld wrote:

> Hey gang,
> I have a half full bottle of General Cement Q Dope which has turned
> to the consistancy of Jello. What can I use as a thinner to make it
> usable again?
>
> Thanks
>
> Bob WB0POQ

I use lacquer thinner.

Dale W4OP

3811. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 05:07:07 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3CF31049.2FC430E8@att.net>
Source record: 43852

Bob Liesenfeld wrote:

> Hey gang,
> I have a half full bottle of General Cement Q Dope which has turned
> to the consistancy of Jello. What can I use as a thinner to make it
> usable again?
>
> Thanks
>
> Bob WB0POQ

I think most any volatile solvent will work. I use acetone. You can make your own Q dope by dissolving styrofoam peanuts or chunks in solvent. Do a Google search for info on this, there was a thread a couple years ago involving Barry Ornitz who IIRC is a chemical engineer. He told the whole story on Q dope.

Dick

3812. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 05:23:07 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CF3143B.5702CCB@eznec.com>
Source record: 43853
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

As usual, I've got a lot to learn. What I've seen overwhelmingly at flea markets, electronics stores, and places like EH Yost are Panasonic SLA batteries. These are of the absorbed electrolyte type, in which the liquid electrolyte is absorbed into the plates and separators. http://www.panasonic.com/industrial/battery/oem/images/pdf/slaover.pdf discribes these units. In second place for the number of batteries I've seen for sale are the small Yuasa SLA batteries. I couldn't find a description of the electrolyte system in a quick search of the web, but an old data sheet I have describes the system as "suspended electrolyte". I've assumed that these are also AGM type, but perhaps I'm wrong.

I couldn't find any reference to Yaesu batteries. Perhaps you mean Yuasa. But I couldn't find a 17 Ah battery among their offerings. Do you have the part number of this apparently very common battery? I'd like to look at a data sheet to learn more about it.

Roy Lewallen, W7EL

Sylvan Butler wrote:
>
> On Fri, 24 May 2002 19:59:27 -0700, Roy Lewallen <w7el@eznec.com> wrote:
> > I've found that, for reasons that I don't understand, amateurs call all
> > sealed lead-acid batteries "gel cells". All the sealed lead-acid
>
> True.
>
> > batteries I've seen, with the exception of cylindrical Gates cells, have
> > liquid electrolyte. Sealed lead-acid batteries with gelled electrolyte
> > do exist, but they're relatively rare. So without other information, I'd
>
> Not at all rare.
>
> The typical "maintenance free" lead acid is not sealed and will
> spill in some positions, and they do vent under hard charging.
>
> The true sealed lead-acid can be operated in any position (will not
> leak) and does not vent unless severely abused (venting is a last
> chance method to avoid a case rupture, similar to nicd/nimh).
>
> I have only seen two technology types of sealed lead-acids. The
> gelled electrolyte type is by far the most common. The other is the
> starved electrolyte, typified by the Absorbed Glass Mat (AGM)

> batteries like the Optima yellow or red top or the exide "6 pack".
>
> The gelled cells are a fraction of the price of AGM cells. They are
> found in alarm equipment, "portable jump start" power packs,
> children's rechargable riding toys, emergency lighting, rechargable
> lawn and garden equipment, consumer computer UPS systems, etc. In
> other words, nearly everyplace which needs higher capacity than a
> small nicd pack, and where the weight of lead-acid is tolerable.
>
> The typical yeasu 12v/7ah/$20 "brick" is a gelled electrolyte, and
> probably the single most common sealed lead acid battery in the US.
>
> > assume that the Mendelsons "gel cells" have liquid electrolyte, not
> > gelled.
>
> I wouldn't. But $16 is a very good price for new 12v/17ah gelled...
>
> sdb
> --
> | Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
> | Watch out for my e-mail address. Thank UCE. ##### change ^ to @ ##### |
> They that can give up essential liberty to obtain a little temporary
> safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
> Fight terrorism, arm the population!

3813. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 05:25:38 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <mxEI8.46736$gk.4282291@bin2.nnrp.aus1.giganews.com>
Source record: 43854

And all along I thought Q Dope was polystyrene cement.

3814. Program DIPCAGE1.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 07:09:58 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <acvag5$4tq$1@paris.btinternet.com>
Source record: 43856

NOW AVAILABLE "DIPCAGE1.exe"

RESONANT LENGTH, END-EFFECT, BANDWIDTH, INPUT RESISTANCE OF 1/2-WAVE DIPOLE.

This is a little more accurate version of WIRECAGE.exe which it replaces. It may be found easier to understand and use. It computes the resonant length, end-effect, bandwidth versus various SWR points, receiving 3dB bandwidth, center feedpoint input resistance at resonance, etc. Input resistance values are somewhat smaller than usually stated but this is not of great consequence since in practice there are a number of sources of uncertainty affecting this non-critical parameter.

The dipole conductor may be any wire gauge, rod or tube, or a cylindrical cage of any number of wires. The usual facilities are available to vary antenna dimensions and number of wires in small increments while observing computed output values.

This program is more of educational than practical value since it will be seen that at HF the trouble and expense of increasing antenna diameter is not justified by the trivial improvement in bandwidth which might be obtained.

DIPCAGE1 is contained in one 36.5 KiloBytes file. Download from website below in a few seconds. No unzipping inconvenience. Run immediately. Or it can be run without downloading.

========================
Regards from Reg G4FGQ
Free Radio Modelling Software
Go to http://www.g4fgq.com
========================

3815. Project Box for APRS TinyTrak????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 11:35:12 UTC
From: "J. Duffy Beischel" <jduffy@zoomtown.com>
Message-ID: <uf6qrho67kqc4d@corp.supernews.com>
Source record: 43857

Anyone know where I can get a metal project box that has two DB9 cutouts in the
back? I can drill the holes for the LEDs and the switches, but I hate making
the cutouts for the DB-9's. Anyone out there know of a source for boxes?
Does not have
to be real small. I like room to work. Any suggestions?

Duffy - WB8NUT

3816. Re: Cushcraft R7 / R7000 Antennas INFO Page w/downloads

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 13:35:08 UTC
From: "Eike Lantzsch, ZP6CGE" <eikelan@gmx.net>
Message-ID: <slrnaf71sc.2ia.eikelan@ID-77364.user.dfncis.de>
Source record: 43858

Matt Patterson wrote:
> Good grief.. Here we go again! Here is a copy of the last post like this..
> Notice any similarities! I think someone is neads their head examined..
> You know who you are..
>
>
> "Here is a very well-done Cushcraft R7 / R7000 tech page I found
> with illustrations, tech tips, R7 trap drawings, R7 and R7000
> instruction and assembly manuals too.
>
> It is all free and also all downloadable. By far the very best page of
> it's
> kind I have ever found...
>
> http://www.ab7sl.com/index.html?row1col2=r7.html
>
> Joe Martin - WA5LHV"
>
> "John Smith" <johnsmithinmissouri@netzero.net> wrote in message
> news:4debd24a.0205270815.68ae7211@posting.google.com...
> > Here is a very informative and nicely done Cushcraft R7 / R7000 tech
> > page I found with illustrations, tech tips, R7 trap drawings, R7 and
> > R7000 instruction and assembly manuals too.
> >
> > It is all free and also all - downloadable - and by far the best page
> > of it's kind I have ever found...
> >
> > http://www.ab7sl.com/index.html?row1col2=r7.html
> >
> > John Smith - KB9BMB
> >
>
>

And then it is "its kind" and not "it's kind". The same grammatical
error from two different posters? Well the mistake *is* common... ;-)
It's kind of weird - the John Doe and its kind.

Regards, Ike

3817. NC 300 PIC NEEDED

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 14:06:32 UTC
From: Handi Ham <okiemansc@yahoo.com>
Message-ID: <I9MI8.328$Mo.33@newsread2.prod.itd.earthlink.net>
Source record: 43859
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hi,

I have an NC 300 that was a basket case but followed me home anyway.Now
that I have the electronics working with the exception of a bad 160 meter
coil I am ready for the cosmetics.
The cabinet required a total stripping and I am looking for a side and
back view so I can see the two tone paint scheme used.So far all I have
found is front views.
Any help would be appreciated.
THANKS,
...Charlie...KC0EH...

3818. Mating my HP selective level meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 14:21:20 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <AnMI8.46861$Kp.4770938@bin7.nnrp.aus1.giganews.com>
Source record: 43860

The 3336a/b/c mates perfectly with the HP 3586 a/b/c via the HP-IB. Seems from the manual that all you have to do is connect an interface-bus cable between them, switch one to slave, one to master (via REM switch on the back) and voila, a frequency tracking exciter. (well, there are a lot more options, but I'm not replicating the manual here.)

3819. Re: Two into Motorcycle Headset

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 14:43:10 UTC
From: mcalhoun@ksu.edu
Message-ID: <ad051u$eqe@unix1.cc.ksu.edu>
Source record: 43862

>I would like to run my handheld radio and radar detector into the same
>helmet headset at the same time. Both devices work fine with the headset
>by themselves, but I would like to be able to use them both at once.
>Will the signal coming out the radar detector hurt the radio or vise versa.
>I plan to just spice into the headset, no special devices.

Several years ago I built a simple adapter for connecting up to THREE
audio inputs to one stereo headphone, stuffed it into a 35-mm film
canister, and put it in my "grab-n-go" kit for use in the EOC and under
other emergency situations where I need to listen to more than one audio
signal at a time. Basically, one audio input goes to my left ear, one
to the right, and the third to BOTH ears (which makes its sound appear
to be in the MIDDLE of my head). Here is my adapter's schematic:

```
Tip------------R1----------o---------+
Radio on Left | | All R1's = 6.8 ohm
Sleve----------R1----+ | | Both R2's = 33 ohm
| R2 |
| | +---\/ | Stereo (Right ear)
Tip-----------------(-----o +------\/ | phone (Left ear)
Radio in Middle | | | +------+ jack (8-ohm headset)
Sleve----------R1----o-----(----(----+
| | | - and | are wires (except at
| R2 | the stereo phone jack)
| | | ( is wire crossover
Tip------------R1----(-----o----+ o is wire connection
Radio on Right | + is wire bend
Sleve----------R1----+
```

Basically, the radios on the left/right feed the earphones on the
left/right (assuming you have the headset on correctly!-) and the radio
in the center feeds BOTH earphones. There is nothing magic in the
particular resistor values shown, since each radio's volume control
can be used to adjust relative volumes; the above values were simply my
engineering guestimates, and they've worked well. I've seen fancier
versions (using more resistors, op amps, and/or transformers), but I've
seen no reason to change.

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

3820. Re: NC 300 PIC NEEDED

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 14:47:52 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CF39898.D392721E@netscape.net>
Source record: 43861
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Handi Ham wrote:
>
> Hi,
>
> I have an NC 300 that was a basket case but followed me home anyway.Now
> that I have the electronics working with the exception of a bad 160 meter
> coil I am ready for the cosmetics.
> The cabinet required a total stripping and I am looking for a side and
> back view so I can see the two tone paint scheme used.So far all I have
> found is front views.
> Any help would be appreciated.
> THANKS,
> ...Charlie...KC0EH...

Does this help?
http://www.3rdtech.com/nick/ham/spkrs/nc300.html

-Bill WX4A

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3821. Help finding 10.7MHz crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 14:48:13 UTC
From: Mark Mansfield <mmans@aeneas.net>
Message-ID: <1FNI8.10$pX1.66050@news.uswest.net>
Source record: 43865

Anyone know where I could find some good quality 10.7MHz crystals for a
spectrum analyzer IF circuit, that don't cost a fortune?
I know I can order them special made (and at a 'special' price--read high)
but I'd like to find some
that are surplus and don't cost much in bulk. I can match them if I could
find some with low series resistance.
Thanks!
Mark

3822. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 14:57:04 UTC
From: mcalhoun@ksu.edu
Message-ID: <ad05s0$g19@unix1.cc.ksu.edu>
Source record: 43863

>Looking for a basic surge arrester circuit.
>I have a unit with three MOV's in place, but there are no caps or neon bulb
>I vaguely recall that two caps are used, one between each prong contact and
>the ground, and the neon goes between the prongs contacts. Is this correct?
>Comments, or a schematic or a reference to one, would be appreciated.

A neon bulb isn't going to give much surge surpression (yes, it should conduct when a surge appears, but it'll only carry a milliampere or three, so it won't dampen much of the energy in a true surge!) However, MOV's (Metal-Oxide Varistors) of many voltage and energy ratings are available.

The most common circuit I've seen uses three MOV's, one from each of the three prongs to the other two.

If you would also like some line-noise filtering, the common CORCOM line filter looks like this (the schematic is on some of them):

```
---+-----L----+---
| | For their 250V 3A KRF model
C1 C2 ---------------------------
Line | | Load L = 1.0 millihenry
In ---(----------+--- Out C1 = 9000 picofarad
| | C2 = 2800 picofarad each
| C2
| |
---+-----L----+---
```

--Myron
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

3823. Phase noiseless DDS, resolution vs responce

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 15:18:04 UTC
From: khwas@yahoo.com
Message-ID: <c0eea7ff.0205280718.5858b287@posting.google.com>
Source record: 43864

Hi, All!

I need an advise from professional amateurs and radiosportsmen.
What is better, when building phase noiseless DDS frequency synthesizer:
high frequency resolution or quick responce ?
By responce, I mean time between frequency selection command and
frequency value appearance on output of synthesizer.

For ex:

- 1000 Hz resolution and 1000 millisec responce
- 100 Hz and 10 sec
- 10 Hz and 100 sec
- 1 Hz and 1000 sec
e.t.c.

Thank you.
Vasiliy Khabituyev

3824. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 16:23:10 UTC
From: w4pqwhs@aol.com
Message-ID: <20020528122310.17086.00000841@mb-ce.aol.com>
Source record: 43866

Try a few drops of acitone,sometimes that will re-juvinate Q-dope..You can make Q-dope by grinding plexiglas into a powder ,mix with acitone until you get the consistancy that you need. GL .. Harold W4PQW

3825. GenRad 1657 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 17:39:04 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <uf7g62l3hjo132@corp.supernews.com>
Source record: 43867

What does the right side display show? I need a manual, copy, or simple use instructions.
tnx
hank wd5jfr

3826. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 18:14:32 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0205281014.45883060@posting.google.com>
Source record: 43868
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

mcalhoun@ksu.edu (Myron A Calhoun) wrote in message news:<acs79p$bdk@unix1.cc.ksu.edu>...
> >Maintenance Free car batteries often use a calcium additive that reduces
> >the electrolyte loss and allows a greater margin for overcharge. This
> >....[snip]....
> >However, I don't see why anyone would want to use a stock type
> >car battery unless they had a bunch of junk cars in the yard, and
> >a low current drain accessory to run, like an old CB or 8-track
> >stereo, because stock type low-maintenance or maintenance-free
> >car batteries don't keep well in this kind of operation.
>
> That doesn't match my experience.
>
> I've powered an 100-watt HF transceiver, a 25-watt VHF transceiver, and
> an AM/FM receiver (for easy listening), plus occasionally even the lights
> (when the mains are off) in my shack for over 25 years using stock lead-
> acid batteries from my local discount store. They last about as long
> (3-5 years) in my "shack" as they do in my automobiles.
>
> --Myron.

I've been using them for nearly 15 years here and no problems. Car batteries hold up fine as long as you don't overcharge them, don't let them discharge too far, and keep the water up in them. But I do prefer a marine deep cycle if I had my choice as their design suits radio use better. But a car battery will work just fine. I'm running a 706 on one right now. I use a fully automatic charger to keep the charge up, but a trickle charge will work fine as long as you remember to unhook it when you have a full charge. Heavily discharging a car battery will greatly shorten it's life and capacity. All long as you avoid that, you won't have much trouble. A deep cycle can handle heavy discharges better, but even with those it's best not to heavily discharge them. I never heavily discharge any of those lead acid batteries on purpose. Sometimes it'll happen though out portable etc. If I buy a new battery just for radio use, I get the big marine deep cycles. MK

3827. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 18:23:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CF3CB04.52A8F5D0@eznec.com>
Source record: 43869

Q dope is polystyrene, which has very low loss at RF. Plexiglas is, I
believe, polycarbonate, which is considerably lossier. You'll have
something that might look like Q dope, but it's likely to lower the Q of
any high-Q inductor it's painted on.

Roy Lewallen, W7EL

W4pqw HS wrote:
>
> Try a few drops of acitone,sometimes that will re-juvinate Q-dope..You can make
> Q-dope by grinding plexiglas into a powder ,mix with acitone until you get the
> consistancy that you need. GL .. Harold W4PQW

3828. Re: Help finding 10.7MHz crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 19:12:19 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <5jl7fu0rdhttgarruhrfrloefu9o9ra4r0@4ax.com>
Source record: 43870

JAN Crystal (Ft. Meyers FL) is the least expensive crystal place I've ever found. They do fair work at a relatively low cost.

Jim

"Mark Mansfield" <mmans@aeneas.net>
shared these priceless pearls of wisdom:

->Anyone know where I could find some good quality 10.7MHz crystals for a
->spectrum analyzer IF circuit, that don't cost a fortune?
->I know I can order them special made (and at a 'special' price--read high)
->but I'd like to find some
->that are surplus and don't cost much in bulk. I can match them if I could
->find some with low series resistance.
->Thanks!
->Mark
->
->

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

3829. Re: NC 300 PIC NEEDED

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 22:10:36 UTC
From: Tony Angerame <tangeram@lucent.com>
Message-ID: <ad0uue$9g9@nntpa.cb.lucent.com>
Source record: 43871
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Charlie,

The NC-300 Cabinet is painted light machine gray on the top and top sides just like the front panel the bottom and bottom sides are a much darker color that I have never matched. The dividing line between the two colors is the chrome strip that divides the cabinet top and bottom. I have found that Rustoleum light machine gray matches the top and panel perfrectly.

Tony

3830. Re: Help finding 10.7MHz crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 22:26:59 UTC
From: la8ak.xnd@online.no
Message-ID: <3cf3e4ef.97095891@news.online.no>
Source record: 43872

On Tue, 28 May 2002 12:12:19 -0700, Jim Weir <jim@rst-engr.com> wrote:

>JAN Crystal (Ft. Meyers FL) is the least expensive crystal place I've ever
>found. They do fair work at a relatively low cost.
>
if you pay more than 15 cents per xtals it is expensive

73
LA8AK
--
remove ,xnd to reply

3831. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 22:34:12 UTC
From: w_tom <w_tom1@usa.net>
Message-ID: <3CF405E4.EC5D20C9@usa.net>
Source record: 43873

A surge protector is one component of a surge protection 'system'. But the most critical component in that 'system' - the most critical component in your schematic - is central earth ground. A surge protector located far from earth ground is all but disconnected from the rest of the 'system'. Surge protectors don't stop or absorb surges. That is urban myth. A surge protector only connects a surge to earth ground. It is only one 'system' component. No earth ground means no effective surge protection.

Effective surge protectors shunt (short, connect) each wire to earth ground during the surge. Therefore wire length to earth ground is also an electronic component in your 'system' schematic. A surge protector is only as effective as its earth ground.

Marty wrote:
>
> Looking for a basic surge arrester circuit.
>
> I have a unit with three MOV's in place, but there are no caps or neon bulb
> I vaguely recall that two caps are used, one
> between each prong contact and the ground, and the neon goes between the
> prongs contacts. Is this correct?
>
> I have the 120VAC caps.
>
> Comments, or a schematic or a reference to one, would be appreciated.

3832. Impedance Conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 22:41:54 UTC
From: KIRKWOOD@SEACORP.COM
Message-ID: <3cf406e1.35652224@paperboy.ids.net>
Source record: 43874

Seems simple......I want to connect the audio output of my rig/scanner (which is meant for 8 ohms) to the Line-In port on my computer sound card (600 ohms). I searched for a few hours, but could find no off-the-shelf circuit. I think a 8:600 ohm audio transformer is required at least, but I am concerned about limiting the peak-to-peak input to the sound card. Any thoughts?

Thanks!

AJ
kb1dmm

3833. Re: Coil length and winding pitch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 22:58:05 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ad121s$9hb$2@knossos.btinternet.com>
Source record: 43875

```
>
> R*R * N*N
> L= ----------- uH
> 9R + 10l
>
> "R" is the radius in inches, "l" the length in inches
> and if you don't know what "N" is, you shouldn't be winding coils!
>
> 73 de Phil VK3BHR
```

==========

Yes Phil, it's a popular and useful formula. But how are the length and radius defined ?

3834. Re: Impedance Conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 23:35:12 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CF4149E.5B54@pop.removethistomailme.net>
Source record: 43876

KIRKWOOD@SEACORP.COM wrote:
>
> Seems simple......I want to connect the audio output of my rig/scanner
> (which is meant for 8 ohms) to the Line-In port on my computer sound
> card (600 ohms). I searched for a few hours, but could find no
> off-the-shelf circuit. I think a 8:600 ohm audio transformer is
> required at least, but I am concerned about limiting the peak-to-peak
> input to the sound card. Any thoughts?
>
> Thanks!
>
> AJ
> kb1dmm

Don't bother with a transformer. Just load the scanner with a 100-ohm
resistor (some AF amplifiers need a load resistance to develop their
full output voltage) and hook it up directly.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3835. Re: Product detector for communications receiver ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-28 23:36:50 UTC
From: la8ak.xnd@online.no
Message-ID: <3cf412a9.108803652@news.online.no>
Source record: 43877

On Tue, 15 Jan 2002 17:10:08 -0500, Michael Black <blackm00@cam.org>
wrote:

>At first, I thought I couldn't come up with anything earlier. But
>Don Stoner, in his "New Sideband Handbook" which came out in 1958,
>says that Murray Crosby "invented the product detector". But
>he doesn't mention a date.
>
>Later in the book, it has a schematic for a phasing adaptor. Since
>the associated text mentions such a thing being originally described
>by Norgaard in the GE Ham News for July/August 1951, and then a more
>commercial version was introduced as the Central Electronics Model A
>"Slicer", it's not clear which the schematic comes from (or if it's
>a newer design). But it just uses a 6AL5 diode for each channel,
>as the mixer to translate the sideband down to audio.
>
>In the ARRL's "Single Sideband for the Radio Amateur" (a collection of
>articles from QST), first edition that came out in 1954, there's
>an article by O.G. Villard, "Demodulation and Selectivity in SSB
>Reception". It says the article is "from" an article in QST
>for April 1948. There's no mention of "product detector" but
>he does talk about frequency conversion for SSB (and, points out
>why it would help for straight AM, I guess paving the way for
>synchronous detectiion). There is a circuit, just a balanced mixer,
>using two 6L7's. He does mention the stuff about turning down the
>gain in an old receiver, or to the same effect, making the BFO stronger.
>Certainly, that is mixing; there are all those old 432 and 1296 MHz
>converters that fed the antenna into a single diode mixer.
>
>I turn the page, and there is a circuit labelled "The Product Detector".
>The blurb says "Here is a useful detector for SSB reception, devised
>by Murray Crosby, W2CSY. It gets its name from its operation --
>the output signal is proportional to the "product" of signals in two
>channels". The book says this is from an article "An All-purpose
>Super Selective IF Amplifier" in QST for March 1953. If that's the
>article I think it is, it is an intriguing scheme. Anyway, it uses
>three triodes, from 1.5 12AU7's.
>
>Right under this, there is a passage that looks like it is new
>writing for the book:
>
>" 'Product vs Envelope Detectors'
>The interesting and significant thing about a product detector is
>that there is no output with the BFO turned off. Unlike an envelope

>detector, where two or more signals coming in will give a beat or beats,
>the product detector requires that the BFO voltage be present. Thus
>it is very similar to a mixer or converter stage, which also gives
>no output unless oscillator voltage is applied.
>
>The advantage of the product detector is consequently that the
>output voltage consists solely of beats with the BFO and not
>cross-modulation beats between signals."
>
>Later in the book, there is an article by Norgaard, which
>is "from 'Practical Single Sideband Reception' in QST for
>July 1948". This is about using phasing for SSB reception,
>and he again uses 6AL5's for the mixers, making sure the
>BFO is strong enough.
>
>Maybe that helps? I don't have a scanner. I do wonder
>what was used in commercial circuits, especially since SSB was
>being used by AT&T long before it became common in ham radio.
>I do remember reading that the ring modulator came out of
>telephone use, though I can't remember where I would have read
>that. But I have no idea whether they were used at the receiving
>end.
>
> Michael VE2BVW
>
>
>
Thanks to all.
I phoned G3VA Pat today, since he mentioned (TT Radcom June 2002) a product detector using ECH35 (6K8) which has been used in an Eddystone receiver since WW2. I said it is probably no product detector since the input levels are not proper for ssb, but it is interesting although Telefunken made a similar circuit in 1936 using ACH1Gr. So I will provide some text and circuit diagrams to Pat. Hope it is allright to quote some of the information given, particularly by VE2BVW and G3RZP?

73
Jan-Martin
LA8AK

--
remove ,xnd to reply

3836. Re: Phase noiseless DDS, software testing tools

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 02:45:17 UTC
From: khwas@yahoo.com
Message-ID: <c0eea7ff.0205281845.7ed6997f@posting.google.com>
Source record: 43880

Skip, previous message, please.
Ok, found solution with responce time better than microsecond.

I have an idea to build DDS with own phase noise better than -200..300 Dbc.
Some mathematician who can deal with irrational calculations can make it
better up to -360 Dbc. I'm looking for testing tools. Where can I
find software tools, which can measure phase noise ?

Thank you.
Vasiliy Khabituyev

3837. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 02:48:49 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <8dc8fuodgit5tu946rgrlg38bmjes4ls02@4ax.com>
Source record: 43878

On Tue, 28 May 2002 18:34:12 -0400, w_tom <w_tom1@usa.net> wrote:
> A surge protector is one component of a surge protection
>'system'. But the most critical component in that 'system' -
>the most critical component in your schematic - is central
>earth ground. A surge protector located far from earth ground
>is all but disconnected from the rest of the 'system'. Surge
>protectors don't stop or absorb surges. That is urban myth.
>A surge protector only connects a surge to earth ground. It is
>only one 'system' component. No earth ground means no
>effective surge protection.

So, a surge protector would be of no use at a tower mounted
repeater, or on an automotive or aircraft radio, eh?

What? Surge suppressors are used in those situations?
And they work?

Hmmm, something must be wrong with your theory.

Earth has no mystical surge absorbing properties. It is just
a big old sheet resistance with varying potentials between
its various points. It's a handy thing if you *want* to produce
ground loops, or inject noise into sensitive equipment, or if
you need a lossy counterpoise for an unbalanced antenna,
but otherwise isn't of much interest to someone trying to
protect equipment from spikes and surges.

Equipment needs protection from transient voltages
across the equipment power leads which can drive
harmful currents *through* the equipment. The way a
surge suppressor does this is by providing a very low
impedance in *shunt* across the equipment. This very
low impedance makes it impossible for a high transient
voltage to appear across the equipment.

Varistors (MOVs) do this because they have a peculiar
property of being very high impedance below a certain
potential, and a very low impedance when that threshold
is exceeded. Provided that the surge doesn't exceed
their joule rating, they rapidly recover to a high impedance
state when the surge has passed, allowing the equipment
to return to normal operation.

(Gas discharge tubes, and zeners, can also perform this
function, though zeners generally don't have a large joule
capacity, and gas discharge tubes won't quench on a

DC line until equipment power is interrupted.)

To maximize a shunt suppressor's effectiveness, it may
be helpful to add a series impedance to the protected lines,
after the shunt element. In DC lines this normally takes
the form of relatively high value series chokes. In AC lines,
the chokes have to be smaller value, otherwise they start
to have a significant effect at the *operating* voltage's
frequency. Fortunately, spikes have a rapid rise time,
equivalent to a high frequency, so a relatively small
value choke will have sufficient impedance to be effective.

No mention of Earth is needed for any of this. It is just
something *over there* that we don't much care about
unless we trip and fall face down on it.

In fact, *avoiding* contact with Earth is generally advisable,
unless such a contact can't be avoided due to a need to
use it as a counterpoise for an unbalanced antenna, or
because the electrical code requires a safety connection
to Earth in a particular mains powered fixed station installation.

Earth is just filled with noise currents, and that can have
an adverse effect on the SNR achievable with sensitive
equipment like a radio receiver if Earth becomes part of
the power or signal path of the receiver.

Gary

3838. Re: Impedance Conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 02:58:11 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <nfg8fuouf7dt1r0laslnf526jak61gbq0h@4ax.com>
Source record: 43879

On Tue, 28 May 2002 22:41:54 GMT, KIRKWOOD@SEACORP.COM wrote:
>Seems simple......I want to connect the audio output of my rig/scanner
>(which is meant for 8 ohms) to the Line-In port on my computer sound
>card (600 ohms). I searched for a few hours, but could find no
>off-the-shelf circuit. I think a 8:600 ohm audio transformer is
>required at least, but I am concerned about limiting the peak-to-peak
>input to the sound card. Any thoughts?

Unless you need the DC isolation provided by a transformer (and in
certain situations you might in order to break a ground loop), there is
a simpler way to deal with this problem. Just terminate the rig audio
with an 8 ohm resistor and *bridge* the sound card input across the
resistor. It is standard engineering practice to use a bridging impedance
that's at least 10 times the terminating resistance as a way of coupling
between a low impedance output and a high impedance input. You
aren't quite at 10x, but it is close enough that it'll work.

A pair of back to back diodes will clip the audio at 0.6 volt if you need
to limit the audio level into the sound card. You should try to keep the
audio level from the rig below this clipping point to avoid distortion, but
if it does accidently stray too high, this sort of clipper will protect the
circuits in the sound card from the overload.

Gary

3839. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 03:07:47 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3CF44603.F3FE7550@visi.com>
Source record: 43881

Jim Higgins wrote:
>
>
> You can make some in a few minutes by dissolving polystyrene
> packing peanuts in toluene. An amazing amount of peanuts will
> dissolve in a bit of toluene, so start off with just a little
> solvent and add more as you go. The peanuts dissolve very
> quickly.
>
Thanks for the very informative response. Are there more than one
type of packing peanut, and if so, how may I recognize polystyrene?

Thanks!

Bob WB0POQ

3840. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 04:42:36 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3CF45C0C.4001F899@att.net>
Source record: 43882

Jim Higgins wrote:

> Q Dope is polystyrene dissolved in toluene. You can dissolve
> polystyrene in acetone, but it will dry very quickly and may
> wrinkle or shrink excessively. Ethyl Acetate is a good solvent
> for polystyrene, but it also dries awfully fast. I'd stick with
> toluene.
>
> Here's a link to a Material Safety Data Sheet for Q Dope.
> http://www.chess.cornell.edu/Safety/MSDS/Q_Dope.htm
> It's nothing but polystyrene and toluene.
>
> You can make some in a few minutes by dissolving polystyrene
> packing peanuts in toluene. An amazing amount of peanuts will
> dissolve in a bit of toluene, so start off with just a little
> solvent and add more as you go. The peanuts dissolve very
> quickly.
>
> If you want to use hard plastic as the starting point, chip it up
> into pieces small enough to soak in a small amount of toluene in
> a tightly closed container for a week or so. Err on the side of
> way too little toluene because once you soften all the plastic,
> you can always easily stir in more toluene. If you have to add
> more hard plastic, be prepared to wait for it to soften. You can
> hasten the process by stirring - daily, hourly, or constantly,
> depending on how impatient you might be.

Where do you get toluene? Acetone is available in small quantities, but I've never seen toluene on the shelf.

Dick

3841. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 04:54:41 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CF45F11.16884061@netscape.net>
Source record: 43883

Dick Carroll wrote:
>
> Jim Higgins wrote:
>
> > Q Dope is polystyrene dissolved in toluene. You can dissolve
> > polystyrene in acetone, but it will dry very quickly and may
> > wrinkle or shrink excessively. Ethyl Acetate is a good solvent
> > for polystyrene, but it also dries awfully fast. I'd stick with
> > toluene.
> >
> > Here's a link to a Material Safety Data Sheet for Q Dope.
> > http://www.chess.cornell.edu/Safety/MSDS/Q_Dope.htm
> > It's nothing but polystyrene and toluene.
> >
> > You can make some in a few minutes by dissolving polystyrene
> > packing peanuts in toluene. An amazing amount of peanuts will
> > dissolve in a bit of toluene, so start off with just a little
> > solvent and add more as you go. The peanuts dissolve very
> > quickly.
> >
> > If you want to use hard plastic as the starting point, chip it up
> > into pieces small enough to soak in a small amount of toluene in
> > a tightly closed container for a week or so. Err on the side of
> > way too little toluene because once you soften all the plastic,
> > you can always easily stir in more toluene. If you have to add
> > more hard plastic, be prepared to wait for it to soften. You can
> > hasten the process by stirring - daily, hourly, or constantly,
> > depending on how impatient you might be.
>
> Where do you get toluene? Acetone is available in small quantities, but I've never
> seen toluene on the shelf.
>
> Dick

Isn't toluene a major component in lacquer thinner?
-Bill

3842. Re: Help finding 10.7MHz crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 05:08:23 UTC
From: budgie <budgie@nowhere.cantech.net.au>
Message-ID: <3cf461b5.6750211@news.cantech.net.au>
Source record: 43884

On Tue, 28 May 2002 09:48:13 -0500, "Mark Mansfield"
<mmans@aeneas.net> wrote:

>Anyone know where I could find some good quality 10.7MHz crystals for a
>spectrum analyzer IF circuit, that don't cost a fortune?
>I know I can order them special made (and at a 'special' price--read high)
>but I'd like to find some
>that are surplus and don't cost much in bulk. I can match them if I could
>find some with low series resistance.

Depending on the bandwidth you are after:
(a) a complete IF filter from a radio with a 10.7 IF; or
(b) individual xtals from such a filter.

Note that the individual xtals will have their centre frequencies
distributed around 10.7 to achieve the requred bandpass in some form
of ladder configuration, so you will need to try each one for the
exact freq you want.

3843. Re: Impedance Conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 05:42:00 UTC
From: k7itm@aol.com
Message-ID: <3200347.0205282142.672f709@posting.google.com>
Source record: 43885

You really don't need to worry about "impedance matching", unless your rig/scanner output is exceptionally quirky. It perhaps wouldn't like a load much lower than 8 ohms, but higher is almost certainly just fine. And the line-in of your computer sound card is likely rather higher than 600 ohms, actually, and in any event won't be bothered by a lower source impedance. The thing you DO need to worry about at least a little is _level_ matching: the rig's output level should be adjusted to something in the range the sound card can handle gracefully. You MAY ALSO wish to have ground loop isolation, and a transformer is one way to get that. But you may well NOT want an 8:600 transformer, because that will step up the voltage to a level that may be greater than the sound card is happy with, unless you turn down the rig's output so far that noise will begin to dominate.

Cheers,
Tom

KIRKWOOD@SEACORP.COM wrote in message news:<3cf406e1.35652224@paperboy.ids.net>...
> Seems simple......I want to connect the audio output of my rig/scanner
> (which is meant for 8 ohms) to the Line-In port on my computer sound
> card (600 ohms). I searched for a few hours, but could find no
> off-the-shelf circuit. I think a 8:600 ohm audio transformer is
> required at least, but I am concerned about limiting the peak-to-peak
> input to the sound card. Any thoughts?
>
> Thanks!
>
> AJ
> kb1dmm

3844. Re: NC 300 PIC NEEDED

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 05:58:32 UTC
From: Phil Nelson <philnelson@antiqueradio.org>
Message-ID: <c6_I8.98$9w1.34@newsread1.prod.itd.earthlink.net>
Source record: 43886
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

For future reference, if you can find a clean spot on your scabby cabinet and bring it to an auto paint shop *before* stripping it, they can do a computer color match and mix you whatever sort of paint you need to repaint in the original color. Go to an auto paint supplier, the guys who make paints for the local body shops. They can make up quarts, spray cans, whatever you need. Then you can strip, prime, and repaint. Or just clean, naval-jelly, clean, buff, clean, (did I mention clean?), and repaint if your original paint isn't too awful.

Phil

3845. Re: Help finding 10.7MHz crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 06:01:41 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0205282201.2fa471fd@posting.google.com>
Source record: 43887

"Mark Mansfield" <mmans@aeneas.net> wrote in message
news:<1FNI8.10$pX1.66050@news.uswest.net>...
> Anyone know where I could find some good quality 10.7MHz crystals for a
> spectrum analyzer IF circuit, that don't cost a fortune?
> I know I can order them special made (and at a 'special' price--read high)
> but I'd like to find some
> that are surplus and don't cost much in bulk. I can match them if I could
> find some with low series resistance.
> Thanks!
> Mark

Is there a reason why it has to be right on 10.7MHz? Because most
people making filters using available crystals seem to look at
what's available in quantity and cheap, and pick the most suitable.
So a completely different frequency might be a better choice.

But I'm assuming you want 10.7MHz because you have filters there
for a wider bandwidth, and these crystals are for a narrow filter.
And I can't see any common use for 10.7MHz crystals.

Can you get by with choosing a frequency where you can get cheap
crystals, and then make two separate filters, one for wide and
one for narrow, or if wide is sufficiently wide, IF transformers?

If you need two bandwidths, and can't choose some other frequency,
maybe you'd want to consider using two separate IF strips. Convert
the incoming signal to an intermediate frequency, and convert that
IF into two separate frequencies via two mixers and oscillators.
Then duplicate the IF circuitry, but with different filters. Active
components tend to be cheaper than special crystals.

Or do a dual conversion, with the first wide IF using a frequency
where you can get a good wide filter, and then convert to another
frequency where you can get cheap crystals. Bypass the home-made filter
when you need the wide-bandwidth.

Sometimes solutions require making a more roundabout trip to
the answer.

If you can get by with crystals in the 10.7MHz vicinity, 10.240Mhz
crystals are a commodity part, what with a binary division bringing
it down to 1KHz, and they are used as conversion oscillators from
10.7MHz to 455KHz (yes, they are 5KHz off for that, but the crystals
are cheaper because they are available, and so receivers using
such crystals use a relatively wide first IF filter).

I was going to say you could get 10.7MHz ceramic resonators, but come to think of it, I'm picturing oscillators (intended for testing 10.7Mhz IF's) which use a 10.7MHz ceramic filter as the frequency determining element.

Michael VE2BVW

3846. Re: Impedance Conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 06:49:33 UTC
From: la8ak.xnd@online.no
Message-ID: <3cf41529.109443983@news.online.no>
Source record: 43888

On Tue, 28 May 2002 23:35:12 GMT, John Miles
<jmiles@pop.removethistomailme.net> wrote:

>KIRKWOOD@SEACORP.COM wrote:
>>
>> Seems simple......I want to connect the audio output of my rig/scanner
>> (which is meant for 8 ohms) to the Line-In port on my computer sound
>> card (600 ohms). I searched for a few hours, but could find no
>> off-the-shelf circuit. I think a 8:600 ohm audio transformer is
>> required at least, but I am concerned about limiting the peak-to-peak
>> input to the sound card. Any thoughts?
>>
>> Thanks!
>>
>> AJ
>> kb1dmm
>
>Don't bother with a transformer. Just load the scanner with a 100-ohm
>resistor (some AF amplifiers need a load resistance to develop their
>full output voltage) and hook it up directly.
>
>-- jm
>
don't understand why the transformer shouldn't be important, a friend
just damaged a port on his computer and it could have been avoided
with transformer. He got some old data modems and would desolder two
transformers to avoid further damages

Impedance is not important. But I would use a series resistor as well
as the 100 ohm resistor across the audio output to avoid overloading
or saturating the transformer if it is small.

73
JM
LA8AK
--
remove ,xnd to reply

3847. Re: Project Box for APRS TinyTrak????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 07:39:21 UTC
From: ermisch@usa.net
Message-ID: <441a87e1.0205282339.7a3f510a@posting.google.com>
Source record: 43889

Try www.sescom.com

They have boxes with pre-punched panels (no double DB9's though) and
also sell the DB9 punches (expensive!). Check out the 'plastic
box-it' - copper clad plastic boxes. Haven't tried these myself but
probably a lot easier to fashion a DB9 hole in plastic than aluminum.
They also offer custom order punched panels - the setup fee is high
but not unreasonable in bulk.

Paul KB0LUR

"J. Duffy Beischel" <jduffy(nospam)@zoomtown.com> wrote in message
news:<uf6qrho67kqc4d@corp.supernews.com>...
> Anyone know where I can get a metal project box that has two DB9 cutouts in
> the
> back? I can drill the holes for the LEDs and the switches, but I hate making
> the cutouts for the DB-9's. Anyone out there know of a source for boxes?
> Does not have
> to be real small. I like room to work. Any suggestions?
>
> Duffy - WB8NUT

3848. Re: Impedance Conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 09:49:14 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <_y1J8.717$a92.44506@newsfep1-win.server.ntli.net>
Source record: 43890

"Tom Bruhns" :
> You really don't need to worry about "impedance matching", unless your
> rig/scanner output is exceptionally quirky. It perhaps wouldn't like
> a load much lower than 8 ohms, but higher is almost certainly just
> fine. And the line-in of your computer sound card is likely rather
> higher than 600 ohms, actually, and in any event won't be bothered by
> a lower source impedance. The thing you DO need to worry about at
> least a little is _level_ matching: the rig's output level should be
> adjusted to something in the range the sound card can handle
> gracefully. You MAY ALSO wish to have ground loop isolation, and a
> transformer is one way to get that. But you may well NOT want an
> 8:600 transformer, because that will step up the voltage to a level
> that may be greater than the sound card is happy with, unless you turn
> down the rig's output so far that noise will begin to dominate.
==========
8:600 Ohms means a transformer winding ratio : sqrt 8 : sqrt 600 = approx
0.12 or 1 : 8.6
So any transformer with that order of magnitude winding ratio will do the
trick. Depending on which audio freqs are to be transferred , a small power
transformer 120V--> 12V will probably be OK.
Or small audio transformers from BC radios etc . A junkbox or flea market
item.

Frank gm0csz.kn6wh@ntlworld.com

3849. FS: CRT's, magnetrons, klystrons etc.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 11:06:09 UTC
From: arnoldg@c2i.net
Message-ID: <3cf4b51d.14768748@news1.c2i.net>
Source record: 43891
Cross-posted to: rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.audio.marketplace

Hello,

The following valves are for sale. They are unused unless otherwise specified, and mostly in original boxes. They are all in stock and can be shipped immediately to anywhere in the world.

2 pcs 3069M Large, round CRT in super heavy duty packing material each in a wooden barrel. One in

completely new, obviously never unpacked (only by me for inspection), the other one seems also to be new and unused but it has

been opened by someone. US$ 250.- each

8 pcs F16-10LD CRT by GEC (some boxes says 'Haltron' on the outside. I have not opened to verify). They

are obviously all unused. US$ 150.- each

1 pcs F16-10LD CRT as above, but made by Mullard. US$ 150.-

1 pcs F16-10LD CRT as above, but this one is used. It has a little spot on the screen. US$ 75.-

4 pcs 7BP7 CRT. The boxes says 'Haltron' I have not looked inside. Unused and unopened. US$ 100.- each

5 pcs 5FP7 CRT. The boxes says 'Haltron'. Some are opened and some are sealed. All the valves are

obviously unused US$ 75.- each

6 pcs P535/1E STC pulse modulator valve. Also coded CV 427. It is similar to 715C. All unused. US$ 50.- each

1 pcs P535/1E Same as above, but this one seems to be used. US$ 30.-

6 pcs C1148 EEV pulse modulator valve. Unused and in original boxes US$ 35.- each

12 pcs C1150/1 EEV pulse modulator valve. Unused and in original boxes US$ 38.- each

3 pcs C1166 EEV pulse modulator valve. Unused and in original boxes. US$ 40.- each

1 pcs QF 451 Ferranti. Looks like a radar TR switch and unused. US$ 20.-

1 pcs KS 9-40D Mullard klystron. Unused in sealed box US$ 20.-

4 pcs M509 EEV magnetron. Also coded CV 3982. Unused in
sealed box US$ 50.- each

2 pcs M599 EEV magnetron. Unused in sealed box US$ 50.- each

1 pcs JP 9-75 Mullard magnetron. Unused in sealed box US$ 50.-

7 pcs 24B1 STC trigatron valve. Unused in original box (Strange
looking valve) US$ 30.- each

11 pcs 725A Western Electric magnetron. Unused in sealed boxes.
US$ 30.- each

Best regards,

Arnold Goksoyr
- manager -

DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267
http://www.demostenes.no

Thousands of different valves in stock as well as
sockets,transformers,books,caps,resistors and
other components. Web site is updated every week.
You can order on-line.

3850. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 11:56:22 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <ltf9fus4qjn40fkrbtl4dqh7rckr0pksmh@4ax.com>
Source record: 43892

On Wed, 29 May 2002 04:42:36 GMT, Dick Carroll <dickc58@att.net>
wrote:

> Where do you get toluene? Acetone is available in small quantities, but I've never
>seen toluene on the shelf.
>
>Dick

I bought a pint of toluene yesterday for around $4.00 at Fischer's Hardware in Springfield VA. (suburban Washington DC) Fischer's is quite a place, a hardware store about the size of a large supermarket but organized and stocked along the lines of a old time hardware store, not a Home Depot.

I bought "E-Z Toluene," from E.E. Zimmerman Co., Pittsburgh PA. It was available in pints, quarts and gallons at Fischer's paint department.

I went to our local small "old time" hardware store and didn't find it. However, the paint expert there said that Fischer's did carry it and he was right. He also said that the "big box" stores (Home Depot, Lowes, etc.) didn't carry it to his knowledge. I also tried Duron paint, but couldn't find it there either.

I used it to restore a bottle of mostly dried up Q-dope. I'm now going to dissolve a box of plastic peanuts to try some home made Q-dope.

Jack K8ZOA

3851. Re: Impedance Conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 13:37:35 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <ad495d$5d8$1@slb6.atl.mindspring.net>
Source record: 43809

I found 8 ohm to 1 K audio transtormers at RadioSchack and that'd be close enough to use between the two systems. You ought to include a 600 ohm attenuator between the transformer and the sound card, perhaps 6 dB.

I just picked 6 dB at random, since I am not sure as to the required drive voltage, but you can also include two back to back diodes across the input to the sound card. The attenuator would limit the current in the diodes when they clip voltage peaks, while the diodes would protect the sound card.

The more correct method would be to look up the input voltage specs for the sound card and then set the attenuator for the proper value.

Jim Pennell
N6BIU

3852. Re: Impedance Conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 16:41:49 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <hx7J8.62042$%o.5893471@bin3.nnrp.aus1.giganews.com>
Source record: 43893

Actually, none of the suggested solutions is optimal.

First, the level out of the scanner is way too high for the sound card. If you connect it diretly you will overload the sound card and potential cause damage.

Second, the scanner output will be very noisy if you turn the gain down low enough to avoid overdriving.

Third, you probably should put a load on the scanner so it will operate optimally, anything over 8 Ohms and less than 100 Ohms probably would be fine.

The best place to get audio out of the scanner is from an earlier audio stage. However, many units use integrated amplifiers and it might not be trivial to create a line output, but you can start by using the signal at the high side of the volume control.

If you don't want to modify the scanner, build a simple attenuator on the speaker output, which will be about three Volts if you have one Watt into eight Ohms. Drop that to about 1/4 Volt, about 10 or 12 to 1 reduction with a little divider, which can also provide the termination mentioned in Third, above. Use, say, a 100 Ohm resistor in series with a 10 Ohm resistor to ground at the scanner output. Use the signal at the 10 Ohm resistor to go to the sound card, but for safety sake I'd put a 1k resistor in the line to the sound card.

Bob

3853. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 16:56:39 UTC
From: w_tom <w_tom1@usa.net>
Message-ID: <3CF50847.CDA77E4@usa.net>
Source record: 43894

In each case cited, a non-destructive path to earth is established. The tower surge protector provides lightning with a path to earth ground that does not pass through the repeater. Low impedance devices not just create equipotential across the repeater. No such equipotential could exist if lightning did not have a path, not through repeater, to earth ground. The equipotetial exists because lightning has a better path around the repeater than through it.

In each example cited, shunt mode surge protectors provide lightning with a path to earth that does not pass through the protected equipment. Normally we accomplish same by directly connecting to earth ground. But not all wires can have such connections and operate. So we install surge protectors to make a temporary shunt to earth during the surge.

Another effective component are filters - series mode protection. They make a path to earth ground less desirable. However without that other, better path to earth directly or through a shunt mode protector, then filters (ie inductors) cannot be effective. Without that other path to earth, then voltage confronting the filter would exceed the filter's breakdown voltage - short across the inductor. So and again, even filters are dependent on lightning having a better path to earth so that protected electronics will not be damaged.

Earth is what the CG lightning bolt wants. It will obtain that objective no matter what is put in its path. Effective surge protection diverts lightning by providing a better, alternative path to earth ground. Lightning seeks earth ground. No surge protector can change that. It is why effective shunt mode protectors are defined by their earth ground; albeit MOVs, GDTs, or spark gaps.

Making a device equipotential or essence a farady cage is another perspective of the issue. However, the lightning bolt still must have that earth ground path. That aspect cannot be avoided. When designing surge protection for complex devices such as aircraft, what is earth ground? Earth ground exists. It just can vary with each event. Lightning strikes the nose and leaves on the left wing. The left wing is the earth ground connection. It strikes the right wing and leaves on the tail. The tail is earth ground in that analysis. Aircraft designs for surge protection are that more complex.

But a tower is quite easy. If the MOV provides a better path
around the repeater, then the repeater is not damaged. But
that is all a shunt mode surge protector (MOVs, GDTs, etc)
does - connect the surge to earth ground through a
non-destructive path.

Gary Coffman wrote:
>
> On Tue, 28 May 2002 18:34:12 -0400, w_tom <w_tom1@usa.net> wrote:
> > A surge protector is one component of a surge protection
> >'system'. But the most critical component in that 'system' -
> >the most critical component in your schematic - is central
> >earth ground. A surge protector located far from earth ground
> >is all but disconnected from the rest of the 'system'. Surge
> >protectors don't stop or absorb surges. That is urban myth.
> >A surge protector only connects a surge to earth ground. It is
> >only one 'system' component. No earth ground means no
> >effective surge protection.
>
> So, a surge protector would be of no use at a tower mounted
> repeater, or on an automotive or aircraft radio, eh?
>
> What? Surge suppressors are used in those situations?
> And they work?
>
> Hmmm, something must be wrong with your theory.
>
> Earth has no mystical surge absorbing properties. It is just
> a big old sheet resistance with varying potentials between
> its various points. It's a handy thing if you *want* to produce
> ground loops, or inject noise into sensitive equipment, or if
> you need a lossy counterpoise for an unbalanced antenna,
> but otherwise isn't of much interest to someone trying to
> protect equipment from spikes and surges.
>
> Equipment needs protection from transient voltages
> *across* the equipment power leads which can drive
> harmful currents *through* the equipment. The way a
> surge suppressor does this is by providing a very low
> impedance in *shunt* across the equipment. This very
> low impedance makes it impossible for a high transient
> voltage to appear across the equipment.
>
> Varistors (MOVs) do this because they have a peculiar
> property of being very high impedance below a certain
> potential, and a very low impedance when that threshold
> is exceeded. Provided that the surge doesn't exceed
> their joule rating, they rapidly recover to a high impedance
> state when the surge has passed, allowing the equipment
> to return to normal operation.

>
> (Gas discharge tubes, and zeners, can also perform this
> function, though zeners generally don't have a large joule
> capacity, and gas discharge tubes won't quench on a
> DC line until equipment power is interrupted.)
>
> To maximize a shunt suppressor's effectiveness, it may
> be helpful to add a series impedance to the protected lines,
> *after* the shunt element. In DC lines this normally takes
> the form of relatively high value series chokes. In AC lines,
> the chokes have to be smaller value, otherwise they start
> to have a significant effect at the *operating* voltage's
> frequency. Fortunately, spikes have a rapid rise time,
> equivalent to a high frequency, so a relatively small
> value choke will have sufficient impedance to be effective.
>
> No mention of Earth is needed for any of this. It is just
> something *over there* that we don't much care about
> unless we trip and fall face down on it.
>
> In fact, *avoiding* contact with Earth is generally advisable,
> unless such a contact can't be avoided due to a need to
> use it as a counterpoise for an unbalanced antenna, or
> because the electrical code requires a safety connection
> to Earth in a particular mains powered fixed station installation.
>
> Earth is just filled with noise currents, and that can have
> an adverse effect on the SNR achievable with sensitive
> equipment like a radio receiver if Earth becomes part of
> the power or signal path of the receiver.
>
> Gary

3854. Re: Coil length and winding pitch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 17:40:55 UTC
From: k7itm@aol.com
Message-ID: <3200347.0205290940.1f49e4d9@posting.google.com>
Source record: 43895

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<acqv8n$k8i$1@knossos.btinternet.com>...
> 2.53 cubed is near enough to 16.

'Tis close indeed, though 2.52^3 is rather closer. I suppose all this
has something to do with something. :-)

Cheers,
Tom

3855. Re: Help finding 10.7MHz crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 17:42:15 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0205290942.2d90f986@posting.google.com>
Source record: 43896

What bandwidth do you need?

There are stock 10.7 MHz crystal filters available for VHF FM type receivers. Digikey is one supplier that carries them, and the price is reasonable.

Bandwidths are dozens of kHz, as used in 146 or 440 MHz receivers.

Jim
N8EE

3856. Re: Coil length and winding pitch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 17:46:38 UTC
From: k7itm@aol.com
Message-ID: <3200347.0205290946.34b0af5f@posting.google.com>
Source record: 43797

k7itm@aol.com (Tom Bruhns) wrote in message
news:<3200347.0205252308.214c2d95@posting.google.com>...
> "Ken Linney" <Ken.Linney@btinternet.com> wrote in message
news:<aco9kv$1gb$1@knossos.btinternet.com>...
> > Here is a useful relationship applicable to single-layer inductors:
> >
> > n = 2.53(L/Sw)^1/3, where n = no of turns, L = inductance in uH &
> > Sw = winding pitch as described by Roy below.
> >
> >
> > If you have the chance see ARRL QEX Sep/Oct 2001 followed by Letters
> > to Editor, p61 in QEX, Jan/Feb 2001.
> >
> > .... 73 Ken, G3UDA
>
> Let's see...that re-arranges to
>
> L = Sw*(n/2.53)^3
>
> The inductance depends only on winding pitch and number of turns, and
> not on the diameter? Hmmmm. Any chance you transcribed that wrong?

It's also a bit strange that by this formula, the inductance,
apparently, depends linearly on the winding pitch. Coils whose pitch
I've had the good fortune to adjust seem to decrease in inductance as
the pitch increases.

Cheers,
Tom

3857. FS: PC 900 high gm triode - cheap

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 18:39:43 UTC
From: arnoldg@c2i.net
Message-ID: <3cf51efe.298927@news1.c2i.net>
Source record: 43798
Cross-posted to:
rec.radio.amateur.homebrew,rec.audio.tubes,rec.audio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

Hello,

PC 900 is a B7G base triode with a heater of 3.9V 0.3A, Va is 135V
Vg -1V Ia=11mA Wa 2.2W Ik=20mA max, u=76 and the gm is 14.5mA/V
A very promising valve to experiment with in low-level stages, both
audio and HF/VHF amplification. It was developed for use in VHF and
UHF television tuners. The low heater voltage makes it very easy to
use in an ordinary 6.3V heater system, just use a dropper resistor of
8.2 ohm 2W and you are very close to 3.9V

I have 400 pcs in stock and I will sell them at only $ 5.00 each or
$ 2.50 each if you buy 100 pcs or more. The valves are NOS, in mint
condition, original boxes and the label is Haltron. but they are
rebranded, and I think they are originally made by Philips or Siemens.
E-mail me if interested.

Best regards,

Arnold Goks&#65533;yr

DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267
http://www.demostenes.no

Thousands of different valves in stock as well as
sockets,transformers,books,caps,resistors and
other components. Web site is updated every week.
You can order on-line.

3858. FS: transistor curve tracer.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 18:48:07 UTC
From: m-38@txucom.net
Message-ID: <3cf52243.179189550@news.tamu.edu>
Source record: 43799

FS: Tektronix/Telequipment CT-71 solid state curve tracer. This is for transistor anyalysis and testing and is not to be confused with the Tek 575 curve tracer that is nearly twice the size. Very clean condition, $125.

3859. Re: GenRad 1657 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 19:31:31 UTC
From: Graham <address@end.of.message>
Message-ID: <3CF52C93.FA88931E@end.of.message>
Source record: 43800

Henry Kolesnik wrote:
>
> What does the right side display show? I need a manual, copy, or simple use
> instructions.
> tnx
> hank wd5jfr

Hi,

There is are a few Digibridge manuals here (registration required):
http://www.quadtechinc.com/digibridge/manuals/

Regards,

Graham
at chelmerland
dot com

3860. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 21:58:08 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3CF54F77.C0BD8274@bellatlantic.net>
Source record: 43801

w_tom wrote:
>
> Surge
> protectors don't stop or absorb surges.

Assuming sufficient magnitude and duration of the surge
across the MOV terminations, an MOV type surge protector
will absorb the surge at it's terminals up to the point
where the protector blows - sometimes violently. If it
did not absorb energy, how did it blow?

Assuming sufficient magnitude of the surge at the mov
terminals, the mov will switch from extremely high
resistance to low resistance. Current will flow through
the MOV and cause heating in that resistance. The MOV is
absorbing energy from the surge and converting it to heat.
It can only dissipate so much of that before it blows.
There's no escaping ohm's law.

> That is urban myth.

No. It's physics.

> A surge protector only connects a surge to earth ground.

No, an MOV type surge protector connects a surge it "sees",
through its own internal resistance, to the places where the
leads of the MOV connect.

>It is
> only one 'system' component. No earth ground means no
> effective surge protection.
>
> Effective surge protectors shunt (short, connect) each wire
> to earth ground during the surge.

If you are talking about MOV's in the above, it is not true.
The MOVs do not short the wires to ground. They connect, or
shunt the wires to ground through a variable resistance. If they
shorted them to ground, the clamping voltage rating would
not exist. The metal oxide varistor changes its resistance
such that sufficient current flows to create a voltage
across the MOV terminations equal to the clamping voltage
rating.

>Therefore wire length to
> earth ground is also an electronic component in your 'system'

> schematic. A surge protector is only as effective as its
> earth ground.

Not true. A surge protector that has no connection
to earth ground can still lessen or eliminate a surge
between two wires to which it is connected.

3861. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 22:43:32 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <6adJ8.12450$wd3.2023398@news6-win.server.ntlworld.com>
Source record: 43802

> I bought "E-Z Toluene," from E.E. Zimmerman Co., Pittsburgh PA. It was
> available in pints, quarts and gallons at Fischer's paint department.
>
> I went to our local small "old time" hardware store and didn't find
> it. However, the paint expert there said that Fischer's did carry it
> and he was right. He also said that the "big box" stores (Home Depot,
> Lowes, etc.) didn't carry it to his knowledge. I also tried Duron
> paint, but couldn't find it there either.
>
> I used it to restore a bottle of mostly dried up Q-dope. I'm now going
> to dissolve a box of plastic peanuts to try some home made Q-dope.
========
Toluene is a benzene derivative and is a carcinogen (substance causing
cancer) . Don't handle it in an enclosed area but in the open (preferably
outdoors) and always use disposable non-absorbing gloves .

Frank gm0csz.kn6wh@ntlworld.com

3862. Re: Phase noiseless DDS, software testing tools

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-29 23:51:05 UTC
From: DrGrok@mungednet.com
Message-ID: <ad3pem$52n$1@bob.news.rcn.net>
Source record: 43803

Good luck!!!

-200 dBc [I assume you mean /Hz] even on the floor at a 10 MHz carrier
frequency would be quite an achievement. -360 dBc -- there no such animal.

Dr. G.

In article <c0eea7ff.0205281845.7ed6997f@posting.google.com>, khwas@yahoo.com
(Vasiliy Khabituyev) wrote:
>Skip, previous message, please.
>Ok, found solution with responce time better than microsecond.
>
>I have an idea to build DDS with own phase noise better than -200..300 Dbc.
>Some mathematician who can deal with irrational calculations can make it
>better up to -360 Dbc. I'm looking for testing tools. Where can I
>find software tools, which can measure phase noise ?
>
>Thank you.
>Vasiliy Khabituyev

3863. Re: Help finding 10.7MHz crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-30 00:07:52 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CF56DC8.6B94@pop.removethistomailme.net>
Source record: 43804

budgie wrote:
>
> On Tue, 28 May 2002 09:48:13 -0500, "Mark Mansfield"
> <mmans@aeneas.net> wrote:
>
> >Anyone know where I could find some good quality 10.7MHz crystals for a
> >spectrum analyzer IF circuit, that don't cost a fortune?

I'd suggest using ECS monolithic crystal filters from Digi-Key
(http://info.digikey.com/T022/V5/0491.pdf). They are only a few bucks
apiece, and they can give you 3 dB responses at +/- 3.75 kHz, +/- 7.5
kHz, and +/- 15 kHz. These are ideal resolution bandwidths for a
non-stabilized spectrum analyzer, since anything narrower won't be very
usable.

The ECS filters can be matched to 50 ohms with a simple L network (a 6.8
uH series inductor and 20-50 pF parallel trimmer at each end, in the
case of the 3000-ohm parts). And they can be cascaded with no problem.
Last weekend, I built an 8-pole IF filter with two ECS-10.7-15B parts.
It had less than 2 dB insertion loss, +/- 0.5 dB passband ripple, and
almost 90 dB of loss at my image frequency (9.790 MHz). A 1 mH choke to
ground between the two filters was all it took to flatten out the
passband.

I found that the ultimate attenuation seems to be limited more by the
input and output matching networks' tendency to "talk" to each other
despite lots of shielding, than by leakage in the filters themselves.
It would probably be possible to do better than 100-110 dB with the
right layout.

These are really great parts.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3864. Re: Impedance Conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-30 00:16:29 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CF56FCC.1127@pop.removethistomailme.net>
Source record: 43805

Bob wrote:
>
> Actually, none of the suggested solutions is optimal.
>
> First, the level out of the scanner is way too high for the sound card. If
> you connect it diretly you will overload the sound card and potential cause
> damage.

That won't happen. A speaker output that delivers 0.5WRMS into 8 ohms
and the typical line-level source for which your sound card was designed
will both be in the 2-3V RMS range. The only difference is that the
speaker output has a lower source impedance.

> Second, the scanner output will be very noisy if you turn the gain down low
> enough to avoid overdriving.

See above. You won't need to turn the gain down as much as you think.

> Third, you probably should put a load on the scanner so it will operate
> optimally, anything over 8 Ohms and less than 100 Ohms probably would be
> fine.

True, as noted previously.

> The best place to get audio out of the scanner is from an earlier audio
> stage.

Also true, when it's practical to do so. But far from mandatory.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3865. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-30 00:36:47 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <00tafu0qbqnbi9il2e8v2ktfcjh8qshh9p@4ax.com>
Source record: 43806

>Toluene is a benzene derivative and is a carcinogen (substance causing
>cancer) . Don't handle it in an enclosed area but in the open (preferably
>outdoors) and always use disposable non-absorbing gloves .
>
>Frank gm0csz.kn6wh@ntlworld.com
>
Thanks. Will do my experimentation outdoors.

Jack>

3866. Re: Impedance Conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-30 00:43:35 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <ufatdn9e0fdv41@corp.supernews.com>
Source record: 43807

I've run the speaker level output of a receiver directly into the line input on the sound card numerous times and found the levels about right. Sound card mixer about 1/3 up and receiver set to comfortable listening level with speaker attached.

If you only have a mike input on the sound card then you'll need about a 100 to 1 attenuator to get the speaker levels down to the required mike level inputs.

The other thing that has worked for monitoring is to just set the lap top computer with internal microphone activated near to the receiver speaker.

3867. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-30 02:09:04 UTC
From: Rex <notreally@hotmail.invalid>
Message-ID: <rd2bfucjredsli7tm9532t3vt57rqoknf1@4ax.com>
Source record: 43808

On Wed, 29 May 2002 11:56:22 GMT, Jack Smith <jsmith@mnsinc.com>
wrote:

>> Where do you get toluene? Acetone is available in small quantities, but I've never
>>seen toluene on the shelf.
>>
>>Dick

I had some MEK (methly ethyl keytone) in the garage. I picked it up
at the paint store in California not too long back. It's described
as, "similar to acetone but dries slower". This may be a reasonable
alternative.

I poped some penuts in a small amount and it gobbled them up. I
haven't tried it yet. When I do I'll post again if there were
problems, otherwise assume it worked.

-Rex, KK6MK
[rexa -TheAtSign- Next4dnai -period- (comEnding)]

3868. Re: Help finding 10.7MHz crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-30 03:50:13 UTC
From: Mark Mansfield <mmans@aeneas.net>
Message-ID: <aciJ8.850$LO3.266006@news.uswest.net>
Source record: 43810

Thanks for all the post! Some good ideas in there.

Let me explain why I'm looking for 10.7MHz stuff...

I'm looking for crystals that are 10.7MHz to
make a filter from a idea I seen in Electronics World
magazine (June 1996). It uses 1 crystal per stage for a total of
4 stages. Each stage uses a PIN diode to vary
the bandwidth of that stage. The ideal crystals for this
operate in series fundamental mode, has identical frequencies, and a
minimum equivalent resistance. The more ideal the crystals to
this specification, the narrower the IF stages will be.

To answer the question "why 10.7MHz"?
I'm going to use a Log detector circuit from Analog
Devices that incorporates the AD603/AD8307 in a
circuit that uses a Murata 10.7MHz ceramic filter (which I have)
that has a smooth bandpass characteristic (very little ripple).
I'm not married to 10.7MHz but it seems likely I'll find more
10.7 crystal filters that I can dig the crystals out of and come
up with a matched set easier and cheaper than buying new crystals.

I also have several ceramic filters for 10.7MHz of various bandwidths
that I plan to use if this circuit don't pan out. I may not need these
at all if the crystal IF amp checks out okay (fingers crossed!).

I think my best bet at this time is finding a few crystal filters from
VHF/UHF business band radios, open them up and find 4 closely
matched crystals. I know there are probably many of those floating
around, if I can find the right person or business who has them.
Anyone have any they would sell me??? Let me know!

Thanks for all the help and don't stop now if you have different ideas
to share. I'm still open to different ways to making variable bandwidth
IF amps.

Thanks again!
Mark M.

"JLB" <jim.bolinger@lintek.aeroflex.com> wrote in message
news:8d5ec8a2.0205290942.2d90f986@posting.google.com...
> What bandwidth do you need?
>
> There are stock 10.7 MHz crystal filters available for VHF FM type
> receivers. Digikey is one supplier that carries them, and the price
> is reasonable.
>

> Bandwidths are dozens of kHz, as used in 146 or 440 MHz receivers.
>
> Jim
> N8EE

3869. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-30 06:11:34 UTC
From: w_tom <w_tom1@usa.net>
Message-ID: <3CF5C296.9D9C14B3@usa.net>
Source record: 43811

To say an MOV absorbs surge energy is to say wire protects by absorbing a surge. In a properly sized surge protector, many times more energy is diverted through a shunt mode surge protector than is absorbed. It is not the function of a shunt mode surge protector to absorb energy. It's job is to divert - shunt - energy to earth ground. Like a wire, the MOV is not perfect. Like a wire, the MOV will absorb a minor percentage of the surge. But if the surge is not provided that shunt to earth ground via the MOV, then the surge may find a path to earth destructively through an appliance.

The purpose of shunt mode surge protection is to shunt - short, divert, connect - the surge to earth ground. A better shunt mode surge protector is defined by the even less energy absorbed - just like a better wire is defined by less energy it absorbs. But the function of both wire and shunt mode surge protector is not to absorb or stop a electrical energy.

> A surge protector that has no connection
> to earth ground can still lessen or eliminate a surge
> between two wires to which it is connected.
Only true for differential mode surges which typically don't exist. Destructive surges are typically common mode. Distributing a common mode surge between wires at the appliance will not provide effective protection. But even worse, a shunt mode surge protector can even contribute to damage of an adjacent powered off computer - because the surge protector is too close to transistors and too far from earth ground. All but no earth ground means no effective surge protection.

ehsjr@bellatlantic.net wrote:
>
> w_tom wrote:
> >
> > Surge
> > protectors don't stop or absorb surges.
>
> Assuming sufficient magnitude and duration of the surge
> across the MOV terminations, an MOV type surge protector
> will absorb the surge at it's terminals up to the point
> where the protector blows - sometimes violently. If it
> did not absorb energy, how did it blow?
>
> Assuming sufficient magnitude of the surge at the mov

> terminals, the mov will switch from extremely high
> resistance to low resistance. Current will flow through
> the MOV and cause heating in that resistance. The MOV is
> absorbing energy from the surge and converting it to heat.
> It can only dissipate so much of that before it blows.
> There's no escaping ohm's law.
>
> > That is urban myth.
>
> No. It's physics.
>
> > A surge protector only connects a surge to earth ground.
>
> No, an MOV type surge protector connects a surge it "sees",
> through its own internal resistance, to the places where the
> leads of the MOV connect.
>
> >It is
> > only one 'system' component. No earth ground means no
> > effective surge protection.
> >
> > Effective surge protectors shunt (short, connect) each wire
> > to earth ground during the surge.
>
> If you are talking about MOV's in the above, it is not true.
> The MOVs do not short the wires to ground. They connect, or
> shunt the wires to ground through a variable resistance. If they
> shorted them to ground, the clamping voltage rating would
> not exist. The metal oxide varistor changes its resistance
> such that sufficient current flows to create a voltage
> across the MOV terminations equal to the clamping voltage
> rating.
>
> >Therefore wire length to
> > earth ground is also an electronic component in your 'system'
> > schematic. A surge protector is only as effective as its
> > earth ground.
>
> Not true. A surge protector that has no connection
> to earth ground can still lessen or eliminate a surge
> between two wires to which it is connected.

3870. gu74B (4cx800)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-30 06:32:18 UTC
From: keven <keven@nospam.co>
Message-ID: <3cf5c6c3@news.nz.asiaonline.net>
Source record: 43812

I am thinking of building an HF Amp. I was thinking of using 2 Gu74b's the Russian 4cx800a because the price on these tubs seems very cheap.
I would like to know if any one here has any experience with these tubs?
I've herd some good things about them and some bad things. I don't want to waste my time with them if there not up to scratch. The Amp will be mostly used for SSTV.

Thank you
Jerry

3871. Re: Help finding 10.7MHz crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-30 07:29:28 UTC
From: John Hague <John.Hague@philips.com>
Message-ID: <3CF5D4D8.A42ABA54@philips.com>
Source record: 43813

You could try the crystals swapping board. Their web-page is at:

http://www.senac.com/boards/880/

Hope this helps.

John, G4GOY

3872. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-30 10:27:07 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <rhmgX+R75f98EAGG@ifwtech.co.uk>
Source record: 43814

w_tom wrote:
> To say an MOV absorbs surge energy is to say wire protects by
>absorbing a surge. In a properly sized surge protector, many times
>more energy is diverted through a shunt mode surge protector than is
>absorbed.

That's correct.

>It is not the function of a shunt mode surge protector to absorb
>energy.

Well, not the *main* or intended function. Mostly it's an unwanted inefficiency - it would be far better if the surge protector was 100% efficient at diverting, so there was no risk of its being destroyed by energy absorption.

> It's job is to divert - shunt - energy to earth ground.

Here's where we part company. Your insistence on saying "to earth ground" results in bizarre statements like "The left wing [of an aircraft in flight] is the earth ground connection." It may be the kind of language that specialist avionics EMP engineers might use among themselves, because they all know what they *don't* mean, not really... but the rest of the engineering world quite rightly goes "Huh?"

(Somebody ought to do a linguistics PhD on 'The Deliberate Misuse of Normal Language as an Initiation Ritual into a Closed Workgroup.' Heck, they probably have already.)

It's far better to think and talk about diverting unwanted energy *away from* the equipment you want to protect. That gives you a consistent way of thinking which applies to all kinds of systems. It doesn't much matter where the diverted current flows away to - what matters are the potential differences experienced inside the equipment, because those are what do the damage.

The objective is to make sure that all the target equipment - all the chassis frames and every connected port - stays at the same potential. It doesn't matter what that potential is. It's free to "bounce" relative to other parts of the system, so long as that doesn't lead to an insulation breakdown which creates a new connection and a new current path.

For any analysis, you need to define a voltage reference point, and that really needs to be a well-defined location close to the equipment. The farther away you go from the target equipment, the harder it is to understand what might happen.

In BC transmitter systems the voltage reference point is usually the metal plate through which the feeders and all other services pass. This plate also has a very good connection to Planet Earth, but the so-called "earthed" end of the connection would not be a good place for the voltage reference, because large and hard-to-quantify potential difference can be developed along the conductor and within the earth itself.

In an aircraft, the voltage reference point can be the left wingtip if you like, but there are probably better choices, closer to the equipment. It certainly does not have to be the place where the lightning departs.

But wherever it is, please don't call it "earth ground"!

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
New e-mail: g3sek@ifwtech.co.uk
New website: http://www.ifwtech.co.uk/g3sek

3873. Re: Impedance Conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-30 10:44:11 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <ufc0k22d7v6c23@corp.supernews.com>
Source record: 43815

> I found 8 ohm to 1 K audio transtormers at RadioSchack and that'd
be
> close enough to use between the two systems. You ought to include
a 600
> ohm attenuator between the transformer and the sound card, perhaps 6
dB.
>
In most cases there is no need to match impedances between the speaker output and the sound card line input. All you need is enough voltage from the speaker output. It does no good to use a transformer which steps up the voltage and then turn around and reduce it again with an attenuator. With any normal sized receiver (5 watts or so max output), a direct connection between the speaker and the line input will work just fine.

3874. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-30 11:06:08 UTC
From: jwodell@provide.net
Message-ID: <3cf806ce.1936481@news.provide.net>
Source record: 43816

On Wed, 29 May 2002 19:09:04 -0700, Rex <notreally@hotmail.invalid>
wrote:

I used to teach college, and we got toluene in 55 gallon drums. They
said that it was nasty stuff, but I must have gone through a couple of
them, and it didn't hurt me. That doesn't mean that it didn't do some
harm, although I'm 67.

As I recall, Duco cement (same stuff) is polystyrene and acetone, and
I think Dupont used to recommend acetone as a solvent and sticker-
together. I think the chemistries of toluene and acetone are very
different.

73 jerry w8gnd

3875. Re: Impedance Conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-30 11:10:40 UTC
From: John Hague <John.Hague@philips.com>
Message-ID: <3CF608B0.EDD21389@philips.com>
Source record: 43817

"Bob Lewis (AA4PB)" wrote:

> > I found 8 ohm to 1 K audio transtormers at RadioSchack and that'd
> be
> > close enough to use between the two systems. You ought to include
> a 600
> > ohm attenuator between the transformer and the sound card, perhaps 6
> dB.
> >
> In most cases there is no need to match impedances between the speaker
> output and the sound card line input. All you need is enough voltage
> from the speaker output. It does no good to use a transformer which
> steps up the voltage and then turn around and reduce it again with an
> attenuator. With any normal sized receiver (5 watts or so max output),
> a direct connection between the speaker and the line input will work
> just fine.

I've used the output from my FT102 directly into the sound card input of
my laptop (Compaq Presario) for PSK31 and so far have had no problems.

The following web-site gives various options for the connections:

http://www.w5bbr.com/soundbd.html

All the best

John, G4GOY

3876. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-30 12:24:30 UTC
From: Bob Liesenfeld <robert.liesenfeld@neicoltech.org>
Message-ID: <3CF619FE.BCE7C13D@neicoltech.org>
Source record: 43818

Bob Liesenfeld wrote:

> Hey gang,
> I have a half full bottle of General Cement Q Dope which has turned
> to the consistancy of Jello. What can I use as a thinner to make it
> usable again?
>
>

More in the ongoing Q dope saga,

I got some packing peanuts which did not dissolve in water, so I figured they were poly (and not starch). I then poured about 1/4 of an oz of fingernail polish remover (mostly acetone according to the label) into a glass dish, and started feeding it peanuts. After about 200 peanuts I realized this was not working. The peanuts (some of which I shredded, and some not) simply shriveled up to about 1/50th their size, but the liquid remained unchanged. It did not get thicker, or sticky.

So.......my next attempt will be to get some *pure* acetone and try it again.

BTW, the fingernail polish remover *did* bring the jello-like Q dope back to a fluid state, but it is now a milky white color instead of the original crystal clear (maybe due to the other stuff in the remover?). I have not yet tried it on a coil to check it's holding properties.

More anon.......

Bob WB0POQ

3877. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-30 14:01:10 UTC
From: Rex <notreally@hotmail.invalid>
Message-ID: <irbcfu4bsussg05dgimovh4p3pegs3i0dv@4ax.com>
Source record: 43819

On Wed, 29 May 2002 19:09:04 -0700, Rex <notreally@hotmail.invalid>
wrote:

>On Wed, 29 May 2002 11:56:22 GMT, Jack Smith <jsmith@mnsinc.com>
>wrote:
>
>>> Where do you get toluene? Acetone is available in small quantities, but I've never
>>>seen toluene on the shelf.
>>>
>>>Dick
>
>I had some MEK (methly ethyl keytone) in the garage. I picked it up
>at the paint store in California not too long back. It's described
>as, "similar to acetone but dries slower". This may be a reasonable
>alternative.
>
>I poped some penuts in a small amount and it gobbled them up. I
>haven't tried it yet. When I do I'll post again if there were
>problems, otherwise assume it worked.
>

I tried the MEK with styrofoam peanuts and it seemed to work fine. I
dissoved a bunch of peanuts in about a tablespoon or two of MEK
until it got a bit thick.

As expected the MEK evaporates not as fast as acetone would. I
expect it would be a little less likely to attack things it was
painted on too.

-Rex, KK6MK
[rexa -TheAtSign- Next4dnai -period- (comEnding)]

[rexa -TheAtSign- Next4dnai -period- (comEnding)]

3878. Re: Help finding 10.7MHz crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-30 14:48:17 UTC
From: Ralf Ballis <rballis@consult.m.uunet.de>
Message-ID: <20020530.14481700@viviana.santiagosoft.de>
Source record: 43820

Take a look at:

http://www.funkamateur.de/cgi-bin/fashop/spez67?IyHW76MV;;174

73 de Ralf, DC2MRB

>>>>>>>>>>>>>>>>> Ursprüngliche Nachricht <<<<<<<<<<<<<<<<<

Am 30.05.02, 14:06:05, schrieb "Peter Parker" <parkerp@alphalink.com.au>
zum Thema Re: Help finding 10.7MHz crystals:

> Get an old VHF Hi-band FM 2-way radio and rip apart the 10.7 MHz xtal
filter
> to get a handful of crystals.

> They might not be exactly 10.7, but they could be pulled.

> Peter

> "Mark Mansfield" <mmans@aeneas.net> wrote in message
> news:1FNI8.10$pX1.66050@news.uswest.net...
> > Anyone know where I could find some good quality 10.7MHz crystals for a
> > spectrum analyzer IF circuit, that don't cost a fortune?
> > I know I can order them special made (and at a 'special' price--read
high)
> > but I'd like to find some
> > that are surplus and don't cost much in bulk. I can match them if I could
> > find some with low series resistance.
> > Thanks!
> > Mark
> >
> >
> >

3879. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-30 15:59:44 UTC
From: Bill Turner <w7ti@dslextreme.com>
Message-ID: <npicfuos8mtivgh117seqqpd8qs31hqnac@4ax.com>
Source record: 43821

On Thu, 30 May 2002 07:01:10 -0700, Rex <notreally@hotmail.invalid>
wrote:

>As expected the MEK evaporates not as fast as acetone would. I
>expect it would be a little less likely to attack things it was
>painted on too.

You may find MEK is actually MORE likely to dissolve things it is put on, such as plastic coil forms. MEK is one of the most powerful solvents there is, so use it with caution.

In the days before heat shrink tubing, it was customary to soak plastic tubing in toluene for several hours to make it expand, then put it on the joint and it would shrink down as the toluene dried and make a tight covering. One day we tried MEK just to see what would happen and it completely dissolved the tubing. Nasty stuff.

Bill, W7TI

3880. Re: Help finding 10.7MHz crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-30 17:09:42 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CF65D43.4769@pop.removethistomailme.net>
Source record: 43822

Mark Mansfield wrote:
>
> I also have several ceramic filters for 10.7MHz of various bandwidths
> that I plan to use if this circuit don't pan out. I may not need these
> at all if the crystal IF amp checks out okay (fingers crossed!).
>

My guess is that you won't want to use ceramic filters in a spectrum analyzer. They have terribly-jagged spurious responses all over the place. They're really only good for use in WBFM receivers. SAW filters would probably be a better choice for your wider RBWs.

Also, unlike in a communications receiver, an incrementally-variable IF bandwidth isn't especially useful in a spectrum analyzer. It's nice if you can get 1/3/10 steps, but even decade steps are fine for most purposes. Some of the most popular surplus models from Tek only offer 1 MHz/100 kHz/10 kHz/1 kHz choices with 100 Hz available optionally, and we're talking about instruments that cost $30-$50K new.

It's much better to use a few high-quality filters with good shape factors and freedom from spurs than to worry about any type of variable-bandwidth hack that might compromise the important specs.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3881. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-30 17:23:27 UTC
From: w_tom <w_tom1@usa.net>
Message-ID: <3CF6600F.833F4FFD@usa.net>
Source record: 43823

For lightning surges, it is better to observe the entire circuit from farther back. In surge protection, that circuit must include the cloud and a region of earth containing opposite polarity charges. This location of charges is typically not at the CG strike location. The part of the circuit that includes a structure's earth ground, incoming utility wires, and building appliances is but a small part of the bigger circuit.

Defining the "airplane's left wing" as earth ground is only to compare aircraft surge protection to structural surge protection and demonstrate the greater complexities of aircraft surge protection. From the perspective of an aircraft surge protector, where that surge must go to complete the circuit changes with each event. From the perspective of flight critical equipment, the surge's outgoing path (what is simplified into the aircraft's earth ground for that event) can vary with each event.

That lightning bolt that exited on the left wing then continued on to earth ground. Therefore, in simplistic terms, that left wing was the airplane's earth ground - the reference point, but only during that event.

The concept of surge protection, such as a faraday cage, is to make the equipment (or structure) equipotential. But in reality we cannot do that. No material is conductive enough. Even for monolithic, all aluminum airplane skin, potential differences exist across the aircraft. Yes, we try to make the building equipotential, such as make the entire ground under the building equipotential. But in reality that is insufficient because we can never make that underneath ground equipotential.

So we attempt to divert (shunt) a surge into a single point ground so that the surge does not approach equipment. But we can never make that central earth ground conductive enough. The entire surge will never take that earth ground path. The diversion path is insufficient because it can never be made conductive enough. To surges, wire is another electronic device.

IOW surge protection is about doing both concepts so that each will compensate of the inadequacies of the other. Central earth ground connected to the best conductive earth under the building, and even better, using an existing Ufer

ground available in most building today makes surge protection
more effective.

Yes, we want to make the underlying ground equipotential AND
we want to divert ae surge to earth before it gets near to the
appliance. We do both with a good, central earthed ground
surge protection 'system'. But since typically destructive
surges are common mode, then earth grounding is essential to a
surge protection 'system'.

What would you like to call that ground rod and other
interconnected conductors in the earth? Central ground?
Equipotenial ground. Most here only know that rod, to which
all incoming utilities (should) connect, as the earth ground
rod. This has been called earth ground, which is connected to
but is different from breaker box safety ground, which is
connected to but is different from motherboard ground. What
would be a better expression for 'earth ground' that every
homeowner would understand?

"Ian White, G3SEK" wrote:
>
> w_tom wrote:
> > To say an MOV absorbs surge energy is to say wire protects by
> >absorbing a surge. In a properly sized surge protector, many times
> >more energy is diverted through a shunt mode surge protector than is
> >absorbed.
>
> That's correct.
>
> >It is not the function of a shunt mode surge protector to absorb
> >energy.
>
> Well, not the *main* or intended function. Mostly it's an unwanted
> inefficiency - it would be far better if the surge protector was 100%
> efficient at diverting, so there was no risk of its being destroyed by
> energy absorption.
>
> > It's job is to divert - shunt - energy to earth ground.
>
> Here's where we part company. Your insistence on saying "to earth
> ground" results in bizarre statements like "The left wing [of an
> aircraft in flight] is the earth ground connection." It may be the kind
> of language that specialist avionics EMP engineers might use among
> themselves, because they all know what they *don't* mean, not really...
> but the rest of the engineering world quite rightly goes "Huh?"
>
> (Somebody ought to do a linguistics PhD on 'The Deliberate Misuse of
> Normal Language as an Initiation Ritual into a Closed Workgroup.' Heck,
> they probably have already.)
>

> It's far better to think and talk about diverting unwanted energy *away
> from* the equipment you want to protect. That gives you a consistent way
> of thinking which applies to all kinds of systems. It doesn't much
> matter where the diverted current flows away to - what matters are the
> potential differences experienced inside the equipment, because those
> are what do the damage.
>
> The objective is to make sure that all the target equipment - all the
> chassis frames and every connected port - stays at the same potential.
> It doesn't matter what that potential is. It's free to "bounce" relative
> to other parts of the system, so long as that doesn't lead to an
> insulation breakdown which creates a new connection and a new current
> path.
>
> For any analysis, you need to define a voltage reference point, and that
> really needs to be a well-defined location close to the equipment. The
> farther away you go from the target equipment, the harder it is to
> understand what might happen.
>
> In BC transmitter systems the voltage reference point is usually the
> metal plate through which the feeders and all other services pass. This
> plate also has a very good connection to Planet Earth, but the so-called
> "earthed" end of the connection would not be a good place for the
> voltage reference, because large and hard-to-quantify potential
> difference can be developed along the conductor and within the earth
> itself.
>
> In an aircraft, the voltage reference point can be the left wingtip if
> you like, but there are probably better choices, closer to the
> equipment. It certainly does not have to be the place where the
> lightning departs.
>
> But wherever it is, please don't call it "earth ground"!
>
> --
> 73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
> 'In Practice' columnist for RadCom (RSGB)
> New e-mail: g3sek@ifwtech.co.uk
> New website: http://www.ifwtech.co.uk/g3sek

3882. Winding the Univeral Wound Coil Question - Gingery Coil Winder

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-30 18:11:31 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <dvocfucso1iir41vf8hf7d0nv219co66a1@4ax.com>
Source record: 43824

I've recently finished building the "Gingery Universal Coil Winder" as per the pamphlet written by Dave Gingery. For those unfamiliar with this gadget, it is a home shop buildable version of the old Morris coil winders that alas have been out of production for 20 years or more.

You can see a drawing of the Gingery coil winder at: http://www.lindsaybks.com/dgjp/djgbk/coil/. The idea is that as you turn the crank, coil form revolves (it is held between the two cones) and the wire guide (the part that is shown as touching the spindle between the two cones) oscillates back and forth. This gives a crossing pattern to the windings. The cam that causes the oscillation is a simple off-center circle, so the resultant pattern will be sinusoidal.

Now comes the fun part--winding some coils. Here, however, I'm not as successful as I thought I might be.

My first problem was the first few windings would slip on the coil form. I more or less solved that problem dissolving some musician's rosin in denatured alcohol and painting the coil form with the solution. After the alcohol evaporates, the coil form is left with a sticky coat that reduces wire slippage to an acceptable degree.

What I'm having trouble with is getting a nice square topped winding. Instead, I see something that looks more like a gentle hill. As the wire oscillates back and forth, it will track for a while long one side of the center and then the other side. I've experimented with the length of the wire guide and what I've found the best is for the end of the guide to be spaced about 3/8s or 1/2 inch from the surface of the coil form (coil form is a 1/4 inch diameter paper tube). In this case, the tension of the wire holds the wire guide at a slight angle below horizontal. (The design of this winder is that the wire guide is supported only by the tension of the wire; it is free to rotate on the oscillating shaft.)

My samples use No. 34 AWG (0.006 inch diameter) enameled magnet wire.

I've also found that gently touching a small brush with the rosin/alcohol mixture to the wire as it feeds onto the coil form helps a bit as it increases the friction between wire layers.

The ratio between coil revolutions and oscillations is variable, over a range of 0.9 revolutions per oscillation to around 2.0 revolution per oscillation. Based on the design of the 2.5 mH choke, I've set the machine for around 0.9 revolutions per oscillation.

I'm hoping someone out there has built the Gingery winder, or has a Morris winder (assuming it uses the same system) and can offer some suggestions, or confirm that perfection isn't possible with this simple machine, at least with enameled wire.

A related question is that all the commercially made universal coils in my junk box (such as the ubiquitous 2.5 mH choke) seem to use wire insulated with fabric (silk? cotton?) that has much more turn-to-turn friction than possible with enamel led wire. This may be the source of my problem, and in fact, the brief operating notes in Gingery's pamphlets suggest cotton covered wire best performance. Anyone have sources for small, say 34 AWG to 28 AWG or so, fabric insulated wire? All I can find is hookup size fabric insulated wire.

By the way, I measured the wire diameter (copper only) on a defective 2.5 mH choke as 0.0062 inches, so no. 34 AWG is about the right diameter.

Jack K8ZOA

3883. Re: Winding the Univeral Wound Coil Question - Gingery Coil Winder

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-30 18:34:58 UTC
From: troglodite@aol.com
Message-ID: <20020530143458.25180.00001980@mb-fp.aol.com>
Source record: 43825

>A related question is that all the commercially made universal coils
>in my junk box (such as the ubiquitous 2.5 mH choke) seem to use wire
>insulated with fabric (silk? cotton?) that has much more turn-to-turn
>friction than possible with enamel led wire. This may be the source
>of my problem, and in fact, the brief operating notes in Gingery's
>pamphlets suggest cotton covered wire best performance. Anyone have
>sources for small, say 34 AWG to 28 AWG or so, fabric insulated wire?
>All I can find is hookup size fabric insulated wire.

You hit the nail on the head. Cotton Covered or Double Cotton Covered wire works best for Pi wound coils. Finding it isn't easy - especially in small quantities. It is still widely used in the pipe organ industry, so you might try someone like Peterson Electro Music, or Organ Supply Industries.

Doug Moore

3884. Ferrite Antenna Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-30 21:55:52 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <ldxJ8.14772$UT.953472@bgtnsc05-news.ops.worldnet.att.net>
Source record: 43826

I have a ferrite antenna for the am bcb with 4 color coded leads: Red,
White, Green, Brown (or Purple). Where in a radio are the leads attached to?

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.360 / Virus Database: 199 - Release Date: 5/7/02

3885. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-30 22:29:54 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CF6A7E2.433AEFC@eznec.com>
Source record: 43827
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

I've just had some interesting and informative email correspondence with Sylvan Butler, N7OWL, about gelled vs absorbed-liquid (AGM) sealed lead acid (SLA) batteries. I had commented that batteries with gelled electrolyte are rare, despite the fact that amateurs call all SLA batteries "gel cells". Sylvan had disagreed, saying that gelled types were common and AGM types rare.

This, and our correspondence, prompted me to do some web searching, and I came up with the following:

One of the batteries I see very often is the Panasonic SLA. Its electrolyte system is described at http://www.panasonic.com/industrial/battery/oem/images/pdf/slaover.pdf. It's pretty clearly AGM type and not gelled.

Sylvan and I both agree that one of the most common SLA batteries encountered is the Yuasa NP series. He had taken one, or a similar battery, apart and found gelled electrolyte. But Here's what the Yuasa web site says about the NP series, at http://www.yuasa-battery.co.uk/NP_Batteries.html:

"All NP batteries utilise Yuasa's unique electrolyte Suspension system incorporating a microfine glass mat to retain the maximum amount of electrolyte in the cells. The electrolyte is retained in the separator material by miniscus effect and there is no free electrolyte to escape from the cells. No gels or other contaminants are added."

The vent is described:

"The batteries are equipped with a simple, safe low pressure venting system which releases excess gas and automatically reseals should there be a build up of gas within the battery due to severe overcharge. However, on no account should the battery be charged in a sealed container."

I downloaded the Yuasa NP manual. It uses slightly different wording to describe the electrolyte system:

"All Yuasa NP batteries utilise an electrolyte suspension system consisting of a glass fibre separator material. This suspension system helps to achieve maximum service life, by fully retaining the electrolyte and preventing its escape from the separator material. No silica gels or other contaminents are used."

So it's clear that the common Yuasa NP series is also AGM and not gelled electrolyte type.

In email, Sylvan commented:

I agree.

But I do know I've taken apart several defunct SLAs and found a pudding-like substance (usually visibly dehydrated and cracking) inside, under the epoxy or tar seal.

Looking at the www.yuasa-battery.co.uk site, they only mention AGM types of SLAs. They also refer to their "NP" family as "a new generation". I wonder if they used to sell gelled electrolyte a few years ago, but now are not?

There are a lot of advantages of AGM compared to gelled, so discontinuing gelled and replacing them with AGM would not suprise me. The only disadvantage would be cost, and that may be somewhat mitigated if (as some nations require) the manufacturer is accounting for end-of-life recycling.

--------end of comment-------

With at least the popular Panasonic and Yuasa types not being gelled, I'll stand by my statement that truly gelled electrolyte SLAs are uncommon, although they certainly do exist. Does anyone know of a relatively common type of SLA that really does have gelled electrolyte?

Roy Lewallen, W7EL

3886. Re: Ferrite Antenna Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 00:32:12 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <3CF6C482.3D694C06@flash.net>
Source record: 43828

Maybe one lead for external antenna; one lead for rf amp; one lead for
oscillator; one lead for common?
It's impossible to tell what lead is used where! An inductance meter
would tell you the various inductances; other than that, who knows. That
ferrite coil was no doubt made for one specific brand and model of
radio.
(I had to check the date to make sure my computer wasn't telling me
April first!)
Steve

marvin rosen wrote:
>
> I have a ferrite antenna for the am bcb with 4 color coded leads: Red,
> White, Green, Brown (or Purple). Where in a radio are the leads attached to?
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.360 / Virus Database: 199 - Release Date: 5/7/02

3887. Re: Winding the Univeral Wound Coil Question - Gingery Coil Winder

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 01:08:58 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3cf6cb7b.4805078@news.peakpeak.com>
Source record: 43829

On Thu, 30 May 2002 18:11:31 GMT, Jack Smith <jsmith@mnsinc.com>
wrote:
>
>A related question is that all the commercially made universal coils
>in my junk box (such as the ubiquitous 2.5 mH choke) seem to use wire
>insulated with fabric (silk? cotton?) that has much more turn-to-turn
>friction than possible with enamel led wire. This may be the source
>of my problem, and in fact, the brief operating notes in Gingery's
>pamphlets suggest cotton covered wire best performance. Anyone have
>sources for small, say 34 AWG to 28 AWG or so, fabric insulated wire?
>All I can find is hookup size fabric insulated wire.
>
It's a good bet that the commercial chokes use Litz wire, possibly
with a fabric wrap. This gives higher "Q" at MF and low HF
frequencies. The irregular surface helps hold the turns in place.

Be careful with any coil dope you apply to Litz. It's made to be
chemically or thermally stripped, so the coating can be damaged by
many solvents. Check for compatibility before winding!

Buying Litz in small quantities isn't easy. Try unwinding an unwanted
or broken junkbox part if your needs are small. This works best on
parts that are finished with wax, not varnished ones!

Good luck,

--KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

3888. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 01:32:53 UTC
From: Tony Bogusz <tony_b@ameritech.net>
Message-ID: <9pAJ8.22084$d7.6149348@newssrv26.news.prodigy.com>
Source record: 43831

I've been reading this thread with great interest. I now know how to make home made Q-Dope and how to recover the stuff that has gelled up and is unusable. Please tell me, however, because I don't know: What are the intended uses of Q-Dope?

I've heard of and actually used General Cement's "corona dope" to fix arcing flyback transformers in old color TV's, but have never heard of Q-Dope!!!

Thanks and 73.

Tony (W9MT)

Bob Liesenfeld <wb0poq@visi.com> wrote in message news:3CF2E10D.B24F4F0C@visi.com...
> Hey gang,
> I have a half full bottle of General Cement Q Dope which has turned
> to the consistancy of Jello. What can I use as a thinner to make it
> usable again?
>
> Thanks
>
> Bob WB0POQ

3889. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 01:51:36 UTC
From: Tony Bogusz <tony_b@ameritech.net>
Message-ID: <HGAJ8.22087$d7.6151273@newssrv26.news.prodigy.com>
Source record: 43833

Thank you.

Tony B.

Bob Liesenfeld <wb0poq@visi.com> wrote in message
news:3CF6E639.6D4314F8@visi.com...
> Tony Bogusz wrote:
> >
> Please tell me, however, because I don't know: What are the
> > intended uses of Q-Dope?
>
> It is used to 'paint' over the windings of a coil to secure the
> windings to the form. I believe the "Q" comes from the fact that once
> dry, the coating has little loss at RF so as not to degrade the Q of the
> coil (Ratio of reactance to resistive loss).
>
> Bob WB0POQ

3890. Re: Winding the Univeral Wound Coil Question - Gingery Coil Winder

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 02:26:46 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CF6DF66.AD6EC89E@netscape.net>
Source record: 43830

Tim Groat wrote:
>
> On Thu, 30 May 2002 18:11:31 GMT, Jack Smith <jsmith@mnsinc.com>
> wrote:
> >
> >A related question is that all the commercially made universal coils
> >in my junk box (such as the ubiquitous 2.5 mH choke) seem to use wire
> >insulated with fabric (silk? cotton?) that has much more turn-to-turn
> >friction than possible with enamel led wire. This may be the source
> >of my problem, and in fact, the brief operating notes in Gingery's
> >pamphlets suggest cotton covered wire best performance. Anyone have
> >sources for small, say 34 AWG to 28 AWG or so, fabric insulated wire?
> >All I can find is hookup size fabric insulated wire.
> >
> It's a good bet that the commercial chokes use Litz wire, possibly
> with a fabric wrap. This gives higher "Q" at MF and low HF
> frequencies. The irregular surface helps hold the turns in place.
>
> Be careful with any coil dope you apply to Litz. It's made to be
> chemically or thermally stripped, so the coating can be damaged by
> many solvents. Check for compatibility before winding!
>
> Buying Litz in small quantities isn't easy. Try unwinding an unwanted
> or broken junkbox part if your needs are small. This works best on
> parts that are finished with wax, not varnished ones!
>
> Good luck,
>
> --KR0U
>
> -- Tim Groat

You might want to try Charles Days at oldradiodays@attbi.com for Litz wire. He was recently juggling his email address so if that one bounces post a note for him on rec.antiques.radio+phono.

-Bill

3891. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 02:55:54 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3CF6E639.6D4314F8@visi.com>
Source record: 43832

Tony Bogusz wrote:
>
Please tell me, however, because I don't know: What are the
> intended uses of Q-Dope?

It is used to 'paint' over the windings of a coil to secure the windings to the form. I believe the "Q" comes from the fact that once dry, the coating has little loss at RF so as not to degrade the Q of the coil (Ratio of reactance to resistive loss).

Bob WB0POQ

3892. Another 10.7 MHz IF filter question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 03:10:40 UTC
From: pdrunen@aol.com
Message-ID: <20020530231040.04266.00001269@mb-fh.aol.com>
Source record: 43834

Hi Group,

I am looking for a 10.7 MHz IF filter also, however I need a 2 MHz bandwidth. The largest bandwidth I have found to be in the FMBC receivers at about 200KHz.

Is there a method to reduce the Q or whatever in the 10.7 MHz 200KHz filter so that it increases the -3db BW to 2 MHz?

How about a two crystal filter with Lower freq crystal at 8.7MHz and Upper Freq at 12.7 MHz ?

How about a discrete(L/C) or active (op-amp) filter?

Others????

Thanks,

Paul

3893. Re: Back up Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 03:12:30 UTC
From: JB <ac6tk@nospamcybertime.net>
Message-ID: <ad6pkv$f70$1@madmax.keyway.net>
Source record: 43835
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

```
: > >Maintenance Free car batteries often use a calcium additive that reduces
: > >the electrolyte loss and allows a greater margin for overcharge. This
: > >....[snip]....
: > >However, I don't see why anyone would want to use a stock type
: > >car battery unless they had a bunch of junk cars in the yard, and
: > >a low current drain accessory to run, like an old CB or 8-track
: > >stereo, because stock type low-maintenance or maintenance-free
: > >car batteries don't keep well in this kind of operation.
: >
: > That doesn't match my experience.
: >
: > I've powered an 100-watt HF transceiver, a 25-watt VHF transceiver, and
: > an AM/FM receiver (for easy listening), plus occasionally even the lights
: > (when the mains are off) in my shack for over 25 years using stock lead-
: > acid batteries from my local discount store. They last about as long
: > (3-5 years) in my "shack" as they do in my automobiles.
: >
: > --Myron.
:
: I've been using them for nearly 15 years here and no problems. Car
: batteries hold up fine as long as you don't overcharge them, don't let
: them discharge too far, and keep the water up in them. But I do prefer
: a marine deep cycle if I had my choice as their design suits radio use
: better. But a car battery will work just fine. I'm running a 706 on
: one right now. I use a fully automatic charger to keep the charge up,
: but a trickle charge will work fine as long as you remember to unhook
: it when you have a full charge. Heavily discharging a car battery will
: greatly shorten it's life and capacity. All long as you avoid that,
: you won't have much trouble. A deep cycle can handle heavy discharges
: better, but even with those it's best not to heavily discharge them. I
: never heavily discharge any of those lead acid batteries on purpose.
: Sometimes it'll happen though out portable etc. If I buy a new battery
: just for radio use, I get the big marine deep cycles. MK

Here's my experience:

I find that I have had to replace stock Automotive starting batteries
about 2:1 when compared to Marine Deep Cycle batteries.

I have had good life with Gates cells even though I have only bought
used ones. All of gells (or whatever) are pulls from UPS service, and
either they are good and I get a few years use or I pitch them. I have
a couple that claim to be sealed that didn't have as much life as the
```

sealed Gells (says "GELL" on the side) that were 5 years old when
I got them.

Currently I have 7 years on a Nautilus group 27 Deep Cycle Marine
in the trunk (in a box with a fusible link) that pulls all the radio gear
with the key off and has still outlasted 2 "premium" 72 month batteries
in the front of the vehicle. Before I went to dual systems my battery
life on the front OEM and Premium batteries was even worse. Even
when I was buying the best that could squeeze into the space.
I can't count how many Die Hard and JCPenny batteries I fried when
I was running around with Motracs in the early days. If only Radio
Shack had them on the "free battery a month" cards along with
"lifetime" tubes.

Jim, ac6tk

3894. Re: best Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 03:30:48 UTC
From: Rob <Pse@NoEmail.Com>
Message-ID: <X7CJ8.1994$H67.10931@tor-nn1.netcom.ca>
Source record: 43836
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I have an old boat anchor. I would like to improve its DX performance with a speech processor. What is the best external speech processor out there? Does someone still make them or will I have to build one?

Rob

3895. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 03:58:14 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3CF6F553.98C7EF89@bellatlantic.net>
Source record: 43837

w_tom wrote:
>
> To say an MOV absorbs surge energy is to say wire protects
> by absorbing a surge. In a properly sized surge protector,
> many times more energy is diverted through a shunt mode surge
> protector than is absorbed. It is not the function of a shunt
> mode surge protector to absorb energy.

(Ignoring the first sentence. As will be shown, wire
does absorb surge energy.) That's much better.
Now lets put it into a bit more detailed perspective.
First, consider the circuit as three elements: the path
from the source to the mov with impedance Z1, the mov
itself with impedance Z2, and the path back to the source
with impedance Z3. Total power dissipated at any
instant in time is equal to Isubt^2*Z1 + Isubt^2*Z2 +
Isubt^2*Z3. Z2 varies in the presence of a surge, causing
I to vary, so the term Isubt. We can also look at the circuit
in terms of voltage. The voltage drop across Z1 at any
instant is Isubt*Z1; the voltage drop across the Mov
is Isubt*Z2 (which, during a surge, is the clamping voltage)
and the voltage drop across Z3 is Isubt*Z3.

Now, lets use some numbers. We'll use an MOV with a
clamping voltage of 300 at time T, and specify a surge
of 1,300 volts at time T. We'll specify a run of
25 feet of #12 copper, at 2 ohms per 1000 feet, from the
source of the surge to the MOV another 25 feet of #12
back to the source. Thus each of those wires will have
.05 ohms impedance. Now, since we know the MOV will
have a 300 volt drop across it at time T, we also know
that we need to drop 1,000 volts across the impedance of
the other two elements. Their combined impedance is
.1 ohms. That means that, at time T, the current is
10,000 amps. For 10,000 amps to produce a 300 volt
drop across the MOV, its impedance must be .03 ohms.
The power absorbed in the first wire, at time T is
500 volts times 10,000 amps - the same as the power
in the second wire. The total is 10,000,000. In
the MOV, the power is only 300 volts times 10,000
amps or 3,000,000. Physics dictates that a current
flowing through a resistance causes power to be
absorbed by that resistance.

Now, consider what the MOV sees: the voltage at its terminals, and the current through itself. That voltage is 300 - 500 was dropped across Z1, and 500 was dropped across Z3. The current was computed to be 10,000 amps. So the MOV "sees" 300 times 10,000, and it absorbs that, or dies trying to. Meanwhile, exactly what you said is happening elsewhere in the circuit: many times more energy is diverted elsewhere than is absorbed in the MOV.

> It's job is to divert
> - shunt - energy ...

Its job is to clamp the voltage to some specified level. It does that by changing its internal resistance from very high to very low when the voltage it "sees" rises above some specified level.

> ... to earth ground.

Earth ground may not be involved.

3896. Re: best Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 04:14:14 UTC
From: gaschafer@attbi.com
Message-ID: <3cf6f949.51154650@netnews.attbi.com>
Source record: 43838
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

If you can find an old Comdel CP11, they were an excellent processor.
Plugs in between mike
and audio in on the rig. They convert the audio to SSB, clip it,
filter it and convert it back to
audio again. So it gives the benefit of rf clipping but is in your
audio chain.

73
Gary K4FMX

On Thu, 30 May 2002 23:30:48 -0400, "Rob" <Pse@NoEmail.Com> wrote:

>I have an old boat anchor. I would like to improve its DX performance with
>a speech processor. What is the best external speech processor out there?
>Does someone still make them or will I have to build one?
>
>Rob
>
>
>

3897. Re: best Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 05:36:56 UTC
From: "n7ws at arrl net"
Message-ID: <3cf707ae.38113385@news.triconet.org>
Source record: 43839
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Thu, 30 May 2002 23:30:48 -0400, "Rob" <Pse@NoEmail.Com> wrote:

|I have an old boat anchor. I would like to improve its DX performance with
|a speech processor. What is the best external speech processor out there?
|Does someone still make them or will I have to build one?

Ahem, IMHO, the best one is the one I designed.

See: http://users.triconet.org/wesandlinda/s_proc.pdf

for my paper which was published in Ham Radio Magazine Sept 1979.

There is a remote possibility that I can scrounge up a board for the clipper/filter for this project. The Plessey chip is long obsolete so if you would like compression ahead of the clipper, you would need an alternate circuit.

Once upon a time this was offered as a kit by a company that stole the design from me, but they went belly up a long time ago.

Wes Stewart N7WS
|
|Rob
|
|
|

3898. Re: Another 10.7 MHz IF filter question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 05:43:50 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <q4EJ8.81691$Oa1.7232096@bin8.nnrp.aus1.giganews.com>
Source record: 43840

You didn't state the slope you want. A filter that wide can be implemented with a few low Q tuned circuits. Crystals are inappropriate for such a bandwidth.

Perhaps you'd best design a low pass at 11.7 and a high pass at 9.7 MHz and cascade them. That can be a simple enough filter in each case; if you need steeper slope you can cascade a few like sections.

Bob

3899. FA: FT-243 Xtals-good usable C.W. freqs- ends this weekend

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 07:43:23 UTC
From: Tom N&#65533;JMY - AAR7FV <tfarl@IowaTelecom.net>
Message-ID: <ad79gs$3oh$1@ins22.netins.net>
Source record: 43841

Thanks for taking time to look. I'll be leaving to a hamfest Friday around midday. Here's some links to a few xtals I've got on eBay that will end over the weekend:

40-20-15-10 CW 7004.6 kHz.:
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1356167177

80 Meter Novice Crystal FT-243 3711.5 kHz.:
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1355817446

7023.8 kHz. 40-20M :
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1355932846

Again, I really appreciate your interest. Many thanks.

Tom

3900. FA:-ends SAT: Mizuho SX-59 Preselector - 3-30 Mhz.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 07:53:14 UTC
From: Tom N&#65533;JMY - AAR7FV <tfarl@IowaTelecom.net>
Message-ID: <ad7a37$dm8$1@ins22.netins.net>
Source record: 43842

Thanks for taking time to look. I'll be leaving to a hamfest Friday around midday.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1355767932

This is a very clean example of the Mizuho SX-59 solid state preselector which was sold in the U.S. by Gilfer Associates in the late '70's. It will really punch up the sensitivity and help reduce images in many older ham and shortwave receivers, especially the tube types that seemed to run out of gas above 20 meters. It has an internal relay that can be remote-controlled for transceive operation
I will include the data sheet, operating instructions and manual with this purchase.

Thanks again for looking.

73,
Tom

3901. FA: ends Sat- Vintage Boatanchor Crystal-3544 kHz.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 08:01:01 UTC
From: Tom N&#65533;JMY - AAR7FV <tfarl@IowaTelecom.net>
Message-ID: <ad7ahs$m9f$1@ins22.netins.net>
Source record: 43843

Thanks for taking time to look. I'll be leaving to a hamfest Friday around midday.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1355821375

This is one of those big old crystals from way back when. It looks like a FT-243 on steroids - long pins and wide spacing. This would be a great one for a homebrew CW rig as the 3544 kHz. puts in right in the middle of the "general" segment of the 80 meter band.

Thanks again for looking.

73,
Tom

3902. FA: ends Sun- 5-pack: Mullard 6C4 Electron Tubes NOS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 08:09:37 UTC
From: Tom N&#65533;JMY - AAR7FV <tfarl@IowaTelecom.net>
Message-ID: <ad7b7q$be7$1@ins22.netins.net>
Source record: 43844

Thanks for taking time to look. I'll be leaving to a hamfest Friday around midday.

Here's a pack of five (5) Mullard 6C5 medium-mu triodes.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1355931674

Thanks again for looking.

73,
Tom

3903. Re: best Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 09:04:51 UTC
From: dmj <dj2001@mn.rr.com>
Message-ID: <dj2001-0D1280.04062031052002@zeus-ge0.rdc-kc.rr.com>
Source record: 43845
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

In article <3cf6f949.51154650@netnews.attbi.com>,
gaschafer@attbi.com (Gary Schafer) wrote:

> If you can find an old Comdel CP11, they were an excellent processor.
> Plugs in between mike
> and audio in on the rig. They convert the audio to SSB, clip it,
> filter it and convert it back to
> audio again. So it gives the benefit of rf clipping but is in your
> audio chain.

I have one of these, (Comdel) if you're interested drop me a email at
dj2001@mn.rr.com

Ham Radio was the best ham radio magazine bar none. It was rich with
good technical articles. I have all issues from the first to the last,
but I am keeping them, I still pull a couple of issues once in a while
to just read the articles which are more interesting than what we get
now. I remember the very good split band processor article. I can't
remember the name of the company that built those but I think they were
marketed by Alpha for a while. I'd have to look in one of the HR issues.

73

dj

3904. Re: best Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 10:13:55 UTC
From: "ckh - Too Much SPAM"
Message-ID: <hdwX38NCLQJC-pn2-tYCZXZ3WoW2w@localhost>
Source record: 43846
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

On Fri, 31 May 2002 03:30:48, "Rob" <Pse@NoEmail.Com> wrote:

> I have an old boat anchor. I would like to improve its DX performance with
> a speech processor. What is the best external speech processor out there?
> Does someone still make them or will I have to build one?
>
> Rob

The best add-on speech processor I know of is the ETO-Alpha-77. I
believe they've reopened the business.

3905. 74FST3125 or FST3125 or CBT3125

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 11:18:25 UTC
From: Bruno IK1VHX <bruno.lusu@tin.it>
Message-ID: <5_IJ8.11059$b4.293968@news2.tin.it>
Source record: 43747

I'm looking for 74FST3125 or FST3125 by Fairchild or CBT3125 by Philips
integrated circuit.
I need some pieces (3-10) to homebrew HF receiver like high level mixers
applications.With this I.C. is possible to obtain +45 dBm of IP3 order.
Can you help me and indicate me any distributors here in Italy?
I live in Genoa
73 to all de IK1VHX Bruno
bruno.lusu@tin.it

3906. Re: 74FST3125 or FST3125 or CBT3125

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 11:31:39 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <vaJJ8.160092$Po6.334488@rwcrnsc52.ops.asp.att.net>
Source record: 43748

> I'm looking for 74FST3125 or FST3125 by Fairchild or CBT3125 by Philips
> integrated circuit.
> I need some pieces (3-10) to homebrew HF receiver like high level mixers
> applications.With this I.C. is possible to obtain +45 dBm of IP3 order.
> Can you help me and indicate me any distributors here in Italy?
> I live in Genoa
> 73 to all de IK1VHX Bruno
> bruno.lusu@tin.it
>

Good Morning Bruno. You can purchase the 3125 by a number of manufacturers from Digi Key. Price is about a dollar for single quantity. They do have a $25 minimum order to get away from the surcharge, so pick up something else you need at the same time. Maplin in the UK sells them, as does a supplier in the Netherlands, but the one in Holland wants $5 EACH for them.

The device is good for about +41, +42 in Ip3 tests I've done with square wave LO. Add a few dB for input filter losses and you're right up there with your desired +45.

Regards
W4ZCB

3907. Re: Ferrite Antenna Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 13:37:51 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0205310537.54686ecc@posting.google.com>
Source record: 43749

Hi Marvin,
try to specify, whether all four leads belong to one coil or two
separate coils. Use an ohmmeter. If there are two coils, the "bigger"
one (i.e. more turns, bigger inductance and, probably, bigger
resistance) connects to the variable capacitor and the other one is
coupling to the RF amplifier or mixer. If there is one coil only, then
the section with least turns is probably the coupling lead and the
other two leads are switched to the variable capacitor for MW / LW. Or
there may be a coupling lead for an external antenna, too.

Best regards from Ivan

"marvin rosen" <raghead@worldnet.att.net> wrote in message
news:<IdxJ8.14772$UT.953472@bgtnsc05-news.ops.worldnet.att.net>...
> I have a ferrite antenna for the am bcb with 4 color coded leads: Red,
> White, Green, Brown (or Purple). Where in a radio are the leads attached to?
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.360 / Virus Database: 199 - Release Date: 5/7/02

3908. FS: RS 242 WW2 German power triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 14:08:46 UTC
From: arnoldg@c2i.net
Message-ID: <3cf783c1.10059493@news1.c2i.net>
Source record: 43750

Hello,

I have several of these antique globe shape German triodes in stock.
It is directly heated, and has an European 4-pin base and about 12W
anode dissipation. The heater is 3.8V 0.72A, u=17, S = 3.0mA/V Max.
anode voltage is 400V.The valves are NOS, and very nice to look at.
You will find a picture at my web site. www.demostenes.no
Just search for RS 242 in the left hand corner.
Please contact me by e-mail if you are interested.

Regards,

Arnold Goks�yr
DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267
http://www.demostenes.no

Thousands of different valves in stock as well as
sockets,transformers,books,caps,resistors and
other components. Web site is updated every week.
You can order on-line.

3909. Beer bottle tubes/valves?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 14:28:12 UTC
From: "Odd Erling N. Eriksen" <odderi@pvv.org>
Message-ID: <ad819rogd1@tyfon.itea.ntnu.no>
Source record: 43751

Hi,

A few years ago I read an article in a magazine about some guys who apparently had way too much time on their hands, so they decided to see if it was possible to make a working electron tube using a beer bottle for the casing.

It did work, after a fashion. That I remember. I was, however, unable to find any references on the web; does anybody recognize this plot? If so, would you be so kind as to point me in the right direction? Any web links are most welcome.

Thanks,

--
73 de LC8MAT

Odd Erling, ARK

Are part-time band leaders semiconductors?

3910. Re: Beer bottle tubes/valves?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 14:43:17 UTC
From: fred bartoli <toto@hotmail.toto>
Message-ID: <3cf78bee$0$248$626a54ce@news.free.fr>
Source record: 43752

They probably wanted to build some alectronic device.

Fred.

Odd Erling N. Eriksen <odderi@pvv.org> a crit dans le message :
ad819rogd1@tyfon.itea.ntnu.no...
> Hi,
>
> A few years ago I read an article in a magazine about some guys who
> apparently had way too much time on their hands, so they decided to see
> if it was possible to make a working electron tube using a beer bottle
> for the casing.
>
> It did work, after a fashion. That I remember. I was, however, unable to
> find any references on the web; does anybody recognize this plot? If so,
> would you be so kind as to point me in the right direction? Any web links
> are most welcome.
>
> Thanks,
>
> --
> 73 de LC8MAT
>
> Odd Erling, ARK
>
> Are part-time band leaders semiconductors?

3911. Re: best Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 14:50:25 UTC
From: "n7ws at arrl net"
Message-ID: <3cf782d4.4852613@news.triconet.org>
Source record: 43753
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Fri, 31 May 2002 09:04:51 GMT, dmj <dj2001@mn.rr.com> wrote:

|In article <3cf6f949.51154650@netnews.attbi.com>,
| gaschafer@attbi.com (Gary Schafer) wrote:
|
|> If you can find an old Comdel CP11, they were an excellent processor.
|> Plugs in between mike
|> and audio in on the rig. They convert the audio to SSB, clip it,
|> filter it and convert it back to
|> audio again. So it gives the benefit of rf clipping but is in your
|> audio chain.
|
|
|I have one of these, (Comdel) if you're interested drop me a email at
|dj2001@mn.rr.com

I saw one of the on ebay a while back. Almost bid on it just to "check out the competition." <g>

|
|Ham Radio was the best ham radio magazine bar none. It was rich with
|good technical articles. I have all issues from the first to the last,
|but I am keeping them, I still pull a couple of issues once in a while
|to just read the articles which are more interesting than what we get
|now. I remember the very good split band processor article. I can't
|remember the name of the company that built those but I think they were
|marketed by Alpha for a while. I'd have to look in one of the HR issues.

Maximillion Associates built a commercial split band processor.

After my article was published, I was swamped with requests for a source of circuit boards. I wasn't in the board business but I got so many requests I went to a local company and ordered a minimum run of 100 sets.

I had no soon committed to this than a letter arrives from a company called Circuit Board Specialists. The letter included a set of boards and informed me that they had had so many requests that *they* were going to offer boards for sale. Since the boards had both *my* call sign and the hr logo on them I called Jim Fisk, the founder and editor of hr magazine.

I asked him whether he had a problem with copyright and he replied that he had no objection; and "Oh, by the way, there is a kit coming out for your design." What he failed to mention was that the kit was the first offering from a new company named Radio Kit, that he just happened to own. The kits apparently were in work before the article was published.

I wound up paying for a small classified ad in hr and sold out the first run of boards as well as a follow up order. They literally when around the world. I actually had a request from a VK4 nine years after publication.

BTW, my (and everybody else's) Kenwood TS-870 uses a split band speech processor.

73,

Wes Stewart N7WS

3912. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 16:40:52 UTC
From: gaschafer@attbi.com
Message-ID: <3cf7a836.5581110@netnews.attbi.com>
Source record: 43755

You are forgetting that with an MOV that has a turn on voltage of 300 volts, the equipment that
it is across is handling the first 300 volts and the MOV is dissipating zero at that level. It has not
yet turned on. When it does turn on that leaves 1000 volts to be divided up among the circuits.

But the DC resistance in the circuit is almost insignificant compared to the impedance from the
inductance of the length of the wires. So the MOV when conducting does present a very low
impedance compared to the rest of the circuit. The voltage across it is not going to go much
above the 300 volt turn on level so it does not dissipate much power. Not to say that they can't
blow up from excessive dissipation.

What W-tom is trying to say is that without a short ground lead it is almost like not having a
ground at all. This is of course concerning common mode type surges (lightning). Which does
need to be passed to ground.

In a differential mode (between 2 power leads example) no ground is needed as the energy is
not referenced to ground but between the two wires. These kinds of surges are not usually from
lightning but may be from other equipment on the power line etc. These types of surges will
usually have much less energy than lightning generated surges.

Concerning an airplane getting hit by lightning, who says that it needs to exit the airplane? The
airplane itself as a whole can be ground (flying earth). An airplane getting hit while in the air is
the same as lightning going between two clouds. That charge never ends up on earth. The
charge gets equalized between the two clouds. (cloud to cloud lightning) Not to say that a
lightning strike on it's way to earth couldn't hit a plane on it's way.

73
Gary K4FMX

On Fri, 31 May 2002 03:58:14 GMT, ehsjr@bellatlantic.net wrote:

>
>
>w_tom wrote:
>>
>> To say an MOV absorbs surge energy is to say wire protects
>> by absorbing a surge. In a properly sized surge protector,
>> many times more energy is diverted through a shunt mode surge
>> protector than is absorbed. It is not the function of a shunt
>> mode surge protector to absorb energy.
>
>(Ignoring the first sentence. As will be shown, wire
>does absorb surge energy.) That's much better.
>Now lets put it into a bit more detailed perspective.
>First, consider the circuit as three elements: the path
>from the source to the mov with impedance Z1, the mov
>itself with impedance Z2, and the path back to the source
>with impedance Z3. Total power dissipated at any
>instant in time is equal to Isubt^2*Z1 + Isubt^2*Z2 +
>Isubt^2*Z3. Z2 varies in the presence of a surge, causing
>I to vary, so the term Isubt. We can also look at the circuit
>in terms of voltage. The voltage drop across Z1 at any
>instant is Isubt*Z1; the voltage drop across the Mov
>is Isubt*Z2 (which, during a surge, is the clamping voltage)
>and the voltage drop across Z3 is Isubt*Z3.
>
>Now, lets use some numbers. We'll use an MOV with a
>clamping voltage of 300 at time T, and specify a surge
>of 1,300 volts at time T. We'll specify a run of
>25 feet of #12 copper, at 2 ohms per 1000 feet, from the
>source of the surge to the MOV another 25 feet of #12
>back to the source. Thus each of those wires will have
>.05 ohms impedance. Now, since we know the MOV will
>have a 300 volt drop across it at time T, we also know
>that we need to drop 1,000 volts across the impedance of
>the other two elements. Their combined impedance is
>.1 ohms. That means that, at time T, the current is
>10,000 amps. For 10,000 amps to produce a 300 volt
>drop across the MOV, its impedance must be .03 ohms.
>The power absorbed in the first wire, at time T is
>500 volts times 10,000 amps - the same as the power
>in the second wire. The total is 10,000,000. In
>the MOV, the power is only 300 volts times 10,000
>amps or 3,000,000. Physics dictates that a current
>flowing through a resistance causes power to be
>absorbed by that resistance.
>
>Now, consider what the MOV sees: the voltage at its
>terminals, and the current through itself. That voltage
>is 300 - 500 was dropped across Z1, and 500 was dropped

>across Z3. The current was computed to be 10,000
>amps. So the MOV "sees" 300 times 10,000, and it
>absorbs that, or dies trying to. Meanwhile, exactly what
>you said is happening elsewhere in the circuit: many
>times more energy is diverted elsewhere than is absorbed
>in the MOV.
>
>> It's job is to divert
>> - shunt - energy ...
>
>Its job is to clamp the voltage to some specified level.
>It does that by changing its internal resistance from very
>high to very low when the voltage it "sees" rises above
>some specified level.
>
>
>> ... to earth ground.
>
>Earth ground may not be involved.

3913. Re: Another 10.7 MHz IF filter question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 16:53:06 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0205310853.2f3c47b7@posting.google.com>
Source record: 43754

pdrunen@aol.com (PDRUNEN) wrote in message
news:<20020530231040.04266.00001269@mb-fh.aol.com>...
> Hi Group,
>
> I am looking for a 10.7 MHz IF filter also, however I need a 2 MHz bandwidth.
> The largest bandwidth I have found to be in the FMBC receivers at about 200KHz.
>
>
> Is there a method to reduce the Q or whatever in the 10.7 MHz 200KHz filter so
> that it increases the -3db BW to 2 MHz?
>
> How about a two crystal filter with Lower freq crystal at 8.7MHz and Upper Freq
> at 12.7 MHz ?
>
> How about a discrete(L/C) or active (op-amp) filter?
>
> Others????
>
> Thanks,
>
> Paul

The way to do this is to look back before crystal and ceramic filters
were common.

If there was a need for such a wide IF, it would be supplied by
a string of IF transformers, usually spaced out between IF stages.
Early FM broadcast receivers would do exactly this. If the bandwidth
was too narrow, they'd either load down the IF transformers with
resistors to broaden the response, or move to a higher IF where the
bandwidth was easier to get, or sometimes both.

Back then, such a broad passband was either through calculations
you didn't see in the amateur books, or was haphazard. Now, you
might want to look at the sections of the books that deal with
fixed front-end filters; since people have done this sort of
thing, to do away with a preselector tuning, I'd say the information
is now more readily available. But of course, the wider the passband,
the harder it may be to get it nice and flat.

Ceramic, crystal and active filters tend to be solutions for narrow
band filters. It wouldn't make sense to start with such schemes,
and then try to broaden them, when even something like a string
of IF transformers might not easily offer up 2MHz of bandwidth.

You might want to look into SAW filters, though I don't know if they'd provide 2MHz bandwidth or be available at 10.7MHz. The only place I've come across them is in TV sets and VCRs, where they supply a 6MHz or so passband in the 40MHz range.

One thing about design is that it's the end results that are important, not specific points. So unless you offer up why this filter has to be at 10.7MHz, or perhaps even what you need a 2MHz passband for, finding a solution may not be so easy. Moving to a different center frequency might make sense, except if there is a good reason for it to be at 10.7MHz. Remember, one could always do a conversion from a higher frequency, if necessary.

Michael VE2BVW

3914. Re: Another 10.7 MHz IF filter question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 18:00:21 UTC
From: "Dana H. Myers" <dana@dioxine.net>
Message-ID: <3CF7BA3B.5090803@dioxine.net>
Source record: 43756

I'd suggest an L/C filter, depending on your
ultimate rejection characteristics and shape
factor you'd probably do 3 or 5 sections.

PDRUNEN wrote:
> Hi Group,
>
> I am looking for a 10.7 MHz IF filter also, however I need a 2 MHz bandwidth.
> The largest bandwidth I have found to be in the FMBC receivers at about 200KHz.

Dana K6JQ
dana@dioxine.net

3915. Re: Winding the Univeral Wound Coil Question - Gingery Coil Winder

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 19:35:32 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3CF7D116.E547EB95@bellatlantic.net>
Source record: 43757

Tim Groat wrote:
>
> On Thu, 30 May 2002 18:11:31 GMT, Jack Smith <jsmith@mnsinc.com>
> wrote:
> >
> >A related question is that all the commercially made universal coils
> >in my junk box (such as the ubiquitous 2.5 mH choke) seem to use wire
> >insulated with fabric (silk? cotton?) that has much more turn-to-turn
> >friction than possible with enamel led wire. This may be the source
> >of my problem, and in fact, the brief operating notes in Gingery's
> >pamphlets suggest cotton covered wire best performance. Anyone have
> >sources for small, say 34 AWG to 28 AWG or so, fabric insulated wire?
> >All I can find is hookup size fabric insulated wire.
> >
> It's a good bet that the commercial chokes use Litz wire, possibly
> with a fabric wrap. This gives higher "Q" at MF and low HF
> frequencies. The irregular surface helps hold the turns in place.
>
> Be careful with any coil dope you apply to Litz. It's made to be
> chemically or thermally stripped, so the coating can be damaged by
> many solvents. Check for compatibility before winding!
>
> Buying Litz in small quantities isn't easy.

Agreed. Here are some places to try. I've bought it
from the last one listed - American Science & Surplus.

http://www.corningelectronics.com/litzwire.htm
http://philsaudio.stryke.com/litzwire.htm
http://www.allelectronics.com/cgi-bin/category.cgi
(The above has 3' test leads made of litz for $4.00)
http://www.surplussales.com/Wire-Cable/LitzWire.html
http://www.sciplus.com/singleItem.cfm?terms=978

3916. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 19:55:43 UTC
From: w_tom <w_tom1@usa.net>
Message-ID: <3CF7D53F.11E80C19@usa.net>
Source record: 43758

In repeated studies of aircraft lightning strikes, there was always an incoming and outgoing point. Identifying that path is always part of the investigation into lightning incidents on aircraft. For example, when a Turkish Air Force 747 was struck on takeoff from Spain over the Atlantic in 1970, I remember the entry point as being the nose and exit was the left wingtip. The explosion was a result of currents passing through where the left wing meets the body - a design weakness.

In a two man experimental glider flying north of London, the entry point was the right wing tip and exit was the left wingtip. In that case, the carbon fiber strut carried most of the current but caused fatigue to the strut. In that case, both pilots, rather dazed, managed to recover and escape using parachutes.

But the point is, even in aircraft strikes, there is a current from from the incoming to outgoing point.

A video demonstrating same:
http://lightning.pwr.eng.osaka-u.ac.jp/lrg/temp/plane.html

Gary Schafer wrote:
> ...
> Concerning an airplane getting hit by lightning, who says that it
> needs to exit the airplane? The
> airplane itself as a whole can be ground (flying earth). An airplane
> getting hit while in the air is
> the same as lightning going between two clouds. That charge never ends
> up on earth. The
> charge gets equalized between the two clouds. (cloud to cloud
> lightning) Not to say that a
> lightning strike on it's way to earth couldn't hit a plane on it's
> way.

3917. Re: GenRad 1657 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 20:48:58 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <_kRJ8.16419$UT.1073833@bgtnsc05-news.ops.worldnet.att.net>
Source record: 43759

The right side shows dissipation factor, when you are measuring capacitance, and Q when you are measuring inductance. While the unit doesn't perform the same functions as a Q meter, we are talking about 1/D in this case.

Pete KE9OA

Henry Kolesnik <wd5jfr@oklahoma.net> wrote in message news:uf7g62l3hjo132@corp.supernews.com...
> What does the right side display show? I need a manual, copy, or simple use
> instructions.
> tnx
> hank wd5jfr
>
>

3918. Message Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 21:00:06 UTC
From: Kaos <m3jgh@st-helens.co.uk>
Message-ID: <1022878795.99846.0@demeter.uk.clara.net>
Source record: 43760

Just started up...

http://m3jgh.co.uk

3919. Re: Help finding 10.7MHz crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 21:04:33 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <BzRJ8.16449$UT.1077011@bgtnsc05-news.ops.worldnet.att.net>
Source record: 43761

In the past, I've run into a problem that manifests itself as (2 X 2nd I.F.) rejection. Despite all forms of shielding around the filters, I just couldn't get rid of that 910kHz image. The cause turned out to be the 2nd LO at 10.245MHz feeding back into the 1st mixer. Enclosing this oscillator solved the problem. Since that time, I have switched to an NE602 for the 2nd mixer; the internal micropower oscillator in this device doesn't exhibit this problem.

Pete KE9OA

John Miles <jmiles@pop.removethistomailme.net> wrote in message news:3CF56DC8.6B94@pop.removethistomailme.net...
> budgie wrote:
> >
> > On Tue, 28 May 2002 09:48:13 -0500, "Mark Mansfield"
> > <mmans@aeneas.net> wrote:
> >
> > >Anyone know where I could find some good quality 10.7MHz crystals for a
> > >spectrum analyzer IF circuit, that don't cost a fortune?
>
> I'd suggest using ECS monolithic crystal filters from Digi-Key
> (http://info.digikey.com/T022/V5/0491.pdf). They are only a few bucks
> apiece, and they can give you 3 dB responses at +/- 3.75 kHz, +/- 7.5
> kHz, and +/- 15 kHz. These are ideal resolution bandwidths for a
> non-stabilized spectrum analyzer, since anything narrower won't be very
> usable.
>
> The ECS filters can be matched to 50 ohms with a simple L network (a 6.8
> uH series inductor and 20-50 pF parallel trimmer at each end, in the
> case of the 3000-ohm parts). And they can be cascaded with no problem.
> Last weekend, I built an 8-pole IF filter with two ECS-10.7-15B parts.
> It had less than 2 dB insertion loss, +/- 0.5 dB passband ripple, and
> almost 90 dB of loss at my image frequency (9.790 MHz). A 1 mH choke to
> ground between the two filters was all it took to flatten out the
> passband.
>
> I found that the ultimate attenuation seems to be limited more by the
> input and output matching networks' tendency to "talk" to each other
> despite lots of shielding, than by leakage in the filters themselves.
> It would probably be possible to do better than 100-110 dB with the
> right layout.
>
> These are really great parts.
>
> -- jm

>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

3920. Re: Help finding 10.7MHz crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 21:11:27 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <3GRJ8.16465$UT.1076612@bgtnsc05-news.ops.worldnet.att.net>
Source record: 43762

I have been using the 10.240MHz crystals for a few years. Connecting the cold end of the crystal through a 4 to 40pF cap to ground allows you to warp it to 10.245MHz.

Pete KE9OA

Michael Black <blackm00@cam.org> wrote in message news:6447bcd3.0205282201.2fa471fd@posting.google.com...
> "Mark Mansfield" <mmans@aeneas.net> wrote in message news:<1FNI8.10$pX1.66050@news.uswest.net>...
> > Anyone know where I could find some good quality 10.7MHz crystals for a
> > spectrum analyzer IF circuit, that don't cost a fortune?
> > I know I can order them special made (and at a 'special' price--read high)
> > but I'd like to find some
> > that are surplus and don't cost much in bulk. I can match them if I could
> > find some with low series resistance.
> > Thanks!
> > Mark
>
> Is there a reason why it has to be right on 10.7MHz? Because most
> people making filters using available crystals seem to look at
> what's available in quantity and cheap, and pick the most suitable.
> So a completely different frequency might be a better choice.
>
> But I'm assuming you want 10.7MHz because you have filters there
> for a wider bandwidth, and these crystals are for a narrow filter.
> And I can't see any common use for 10.7MHz crystals.
>
> Can you get by with choosing a frequency where you can get cheap
> crystals, and then make two separate filters, one for wide and
> one for narrow, or if wide is sufficiently wide, IF transformers?
>
> If you need two bandwidths, and can't choose some other frequency,
> maybe you'd want to consider using two separate IF strips. Convert
> the incoming signal to an intermediate frequency, and convert that
> IF into two separate frequencies via two mixers and oscillators.
> Then duplicate the IF circuitry, but with different filters. Active
> components tend to be cheaper than special crystals.
>
> Or do a dual conversion, with the first wide IF using a frequency
> where you can get a good wide filter, and then convert to another
> frequency where you can get cheap crystals. Bypass the home-made filter
> when you need the wide-bandwidth.

>
> Sometimes solutions require making a more roundabout trip to
> the answer.
>
> If you can get by with crystals in the 10.7MHz vicinity, 10.240Mhz
> crystals are a commodity part, what with a binary division bringing
> it down to 1KHz, and they are used as conversion oscillators from
> 10.7MHz to 455KHz (yes, they are 5KHz off for that, but the crystals
> are cheaper because they are available, and so receivers using
> such crystals use a relatively wide first IF filter).
>
> I was going to say you could get 10.7MHz ceramic resonators,
> but come to think of it, I'm picturing oscillators (intended
> for testing 10.7Mhz IF's) which use a 10.7MHz ceramic filter
> as the frequency determining element.
>
> Michael VE2BVW

3921. Re: best Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-05-31 21:36:45 UTC
From: Rob <Pse@NoEmail.Com>
Message-ID: <52SJ8.2085$H67.11239@tor-nn1.netcom.ca>
Source record: 43763
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Many thanks for all the comments. I am curious. What about the W2IHY Technologies 8-Band Audio Equalizer and Noise Gate that is advertised in QST. Will it achieve similar results as a good speech processor?

Rob

"Rob" <Pse@NoEmail.Com> wrote in message news:X7CJ8.1994$H67.10931@tor-nn1.netcom.ca...
> I have an old boat anchor. I would like to improve its DX performance with
> a speech processor. What is the best external speech processor out there?
> Does someone still make them or will I have to build one?
>
> Rob
>
>
>